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## *Abstracts of Articles*

### MORPHOLOGY

**572. BRENT, ROBERT L.** (Jefferson Med. Coll., Philadelphia, Pa.) **The indirect effect of irradiation on embryonic development: II. Irradiation of the placenta.** *Amer. J. Dis. Child.*, 1960, **100**, 127-132. A method of irradiating placental tissue separate from embryonic tissue is described. Rat embryos and placental tissue were selectively irradiated on the 12th gestational day and examined on the 16th gestational day for growth retardation, fetal mortality, and congenital malformations. The maternal organism received no irradiation in this experiment; only the placenta, embryo, or both. This is in sharp contradistinction to the previous paper in which the embryo and placenta were simultaneously shielded, while only the maternal organism was irradiated. **Mortality and Growth Retardation:** The data indicate that irradiation of the placenta (while shielding the embryo and mother) did not alter fetal growth or fetal mortality. This was demonstrated by two separate results within this experiment, namely, irradiation of the placenta resulted in the same fetal mortality and fetal weight as the control embryos, and, secondly, irradiation of the entire embryonic site and the embryo alone resulted in embryos with fetal weights which could not be distinguished statistically. On the other hand, if only the mother was irradiated, fetal death resulted; and the incidence of resorptions increased with the dose rate. Thus, fetal mortality was increased by maternal irradiation and not affected by placental irradiation. **Malformations:** These data lend further support to the conclusion that malformations produced by irradiating pregnant mammals are due primarily to the direct effect of ionizing radiation on the embryo and are not a result of placental injury (on the 12th day at least) or metabolic abnormalities induced in the mother by irradiation of the maternal organism. This is more apparent when one realizes that malformations can be produced with as little as 25 r to 200 r (whole-body irradiation to pregnant mammals); yet in the two indirect experiments herein described doses of 400 r were used in the placental irradiation experiment and 400 to 1,400 r in the maternal irradiation experiment without obvious congenital malformations. Because of the nature of the experimental conditions, one cannot be certain of placental radioresistance at earlier stages of gestation. Furthermore, no broad general conclusions can be drawn regarding the responsibility of the placenta in the over-all picture of congenital malformations. —Author's Summary and Conclusions.

**573. BRENT, ROBERT L.** (Jefferson Med. Coll., Philadelphia, Pa.), & **McLAUGHLIN, MARY M.** **The indirect effect of irradiation on embryonic development: I. Irradiation of the mother while shielding the embryonic site.** *Amer. J. Dis. Child.*, 1960, **100**, 118-126. The experiment herein described concerns the effect of radiating a pregnant rat, while shielding the embryonic site on the ninth day of gestation, to determine to what extent the fetus is affected. The dose necessary for fetal malformation when the entire pregnant animal is irradiated is 25 r to 100 r; 200 r being 100% lethal to the 9-day rat embryo. Only the external features of the term fetuses were examined, but no congenital malformations were seen, even though the type produced by directly irradiating this stage is quite obvious. In spite of 400 r "whole-body" irradiation, 1,000 r and 1,400 r partial-body irradiation on the ninth gestational day, no external teratology was observed in the fetuses. This would indicate that it is apparent that direct irradiation of the embryonic site is responsible for the teratologic effect of x-irradiation. It is tempting to speculate that direct irradiation is wholly responsible at all other stages of gestation for teratology. This is probably correct, but the final evidence is not presented here. The fetal mortality was higher in the irradiated groups. The highest fetal mortality occurred in the 1,400 r partial-body irradiation group. The radiation illness produced in the mothers, which

includes a host of biochemical, physiological, and morphological changes, did affect the organism's ability to hold on to the fetus. Fetal growth was not affected in the low radiation group, although those mothers which received the highest dose of irradiation did have smaller fetuses. Although the factors affecting maternal weight gain are multiple and impossible to single out, it is interesting that the 400 r group gained weight at the same rate as the controls, in spite of a higher maternal mortality rate and higher fetal mortality rate. The results reinforce the enigma of what are the factors responsible for fetal resorption and fetal malformation. Are they quantitative differences of the same metabolic or physiological alterations or quantitatively different factors? This experiment offers little light on this problem except to add one more debilitating condition in the mother which alters some aspects of fetal growth and resorption while not producing teratology; this, in spite of the presence of a multitude of changes produced in the maternal organism. —Authors' Summary and Conclusions.

**574. JAYKKA, S.** (Univer. of Turku, Finland) **The functional structure of the Eustachian valve.** *Biol. Neonatorum*, 1959, **1**, 155-168. 34 autopsies have been performed on infants to clarify the muscular structure and fenestration of the Eustachian valve. The Eustachian valve consists of two superimposed muscle systems of which one spreads radially from the root to the edge of the valve and the other runs parallel to the free edge of the valve. Degeneration of the muscle system leads to the formation of membranous and fenestrated valves. The degeneration process normally occurs postnatally but may be initiated prenatally by asphyxiation. —Author's Summary.

**575. LEWIS, A. B., & GARN, S. M.** **The relationship between tooth formation and other maturational factors.** *Angle Orthodont.*, 1960, **30**, 70-77. Calcification stages of  $M_{2,3}$  and  $P_1$  were compared to progress in ossification (number of wrist centers and "bone age") and with height, weight, and thoracic fat. In infancy and childhood tooth formation and general growth and development are positively though rarely significantly correlated. As adolescence approaches, there is a higher correlation between status of maturation and tooth formation. This is seen by correlations between formation of  $M_2$  and menarche and proximal tibial union. —W. M. Krogman.

**576. NANDA, R. S.** **Eruption of human teeth.** *Amer. J. Orthodont.*, 1960, **46**, 363-378. Utilizing data from longitudinal records of the Denver Child Research Council, jaws and sexes were studied separately. Number of teeth present in percentage of children with age is shown graphically. Range of the number of teeth present for each age was different. Quiescent periods are seen when 8 deciduous teeth are present in each jaw, and again when 4 deciduous teeth had been lost or when 6 permanent teeth were present. Sex differences were not significant, but differences between the jaws were. Age of completion of permanent dentition and age of maximum rate of circumpubertal height "spurt" and age at menarche showed low positive correlation. It is inferred that correlation between facial growth and the dentition is correspondingly low. —W. M. Krogman.

**577. NORRIS, ALBERT S.** (Univer. Iowa Med. Sch., Iowa City) **Prenatal factors in intellectual and emotional development.** *J. Amer. med. Ass.*, 1960, **172**, 413-416. Data from the literature are cited to show the effects the prenatal environment may have on the emotional and intellectual development of the child. Complications of pregnancy have been associated with cerebral palsy, epilepsy, and behavioral disorders. In a British study, pregnancy illness, stress, or both were reported in mothers of 66% of 102 retarded children but in only 30% of those of 450 controls. The obstetrician needs to be alert to the protection of the fetus from the psychophysiological influences that emotional and physical stress can exert. —I. Altman.

**578. ROSE, G. J.** **A cross-sectional study of the relationship of facial areas with several body dimensions.** *Angle Orthodont.*, 1960, **30**, 6-13. Lateral X-ray films

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of the growing head were divided into 5 areas: orbitoethmoidal, maxillary corpus, superior alveolar, inferior alveolar, and mandibular corpus. This was done during the parapubertal period (9-18 years, 50 males, 30 pre- and 25 post-menarcheal females). It was found that CA and carpal ranking were not as reliable guides to facial development as were stature and body weight. —W. M. Krogman.

## PHYSIOLOGY AND BIOCHEMISTRY

**579. ABBAS, T. M.** (Univer. of Bristol), & **TOVEY, J. E.** **Proteins of the liquor amnii.** Brit. med. J., 1960, 1, 476-479. Proteins present in maternal serum, umbilical-cord blood, liquor amnii, and dialysates from maternal serum across "foetal membranes" have been studied with the aid of paper electrophoresis. The protein pattern seen in the liquor amnii has the characteristics of a simple protein dialysate, and can be reproduced in vitro. Evidence is presented to suggest that the swallowed liquor amnii contributes to foetal nutrition and may well provide a source of gamma-globulin and antibodies to the foetus. Despite minor variations, no diagnostically significant changes were detected in the electrophoretic patterns of the liquor in toxemia, anencephaly, twins, hydramnios, and hydrops foetalis. —Authors' Summary.

**580. ABRAMSON, J. H.** (Univer. of Natal, Durban), **GAMPEL, B.**, **SLOME, C.**, & **SCOTCH, N.** **Age at menopause of urban Zulu women.** Science, 1960, 132, 356-357. Interviews with a population sample of Zulu women residing in Durban, Union of South Africa, indicated a tendency for the permanent cessation of menstruation to occur late. The median menopausal age of 33 women questioned within 5 years of their menopause was 48.6 years, and their mean menopausal age was 49.2 years. It is suggested that this may be an effect of malnutrition or of climatic factors. —Abstract.

**581. CHOW, BACON F.** (Johns Hopkins Univer., Baltimore, Md.), & **OKUDA, KUNIO.** **Transfer of vitamins from mother to fetus.** J. Amer. med. Ass., 1960, 172, 422-426. Purpose of the study was to ascertain whether pregnancy induces abnormal metabolism and a greater utilization of vitamin B<sub>12</sub>. In every one of 25 cases in which maternal and fetal serum levels of vitamin B<sub>12</sub> were compared, the concentration in the fetal serum was higher or at least equal to that in the maternal serum. This suggests that the vitamin is drawn from the mother to the fetus. In 14 pregnant women, most of them in active labor, to whom an intramuscular injection of crystalline vitamin B<sub>12</sub> was given, maternal levels were higher only when the injection took place less than 6 hours before parturition. Other data suggest that the fetus has a tendency to draw various vitamins but not glucose or insulin from the mother. "... taken as a whole, these data would indicate that the differences in the vitamin B<sub>12</sub> serum gradient will have physiological meaning and specificity and that this phenomenon is not primarily a chemical one." —I. Altman.

**582. GARN, STANLEY M.**, & **HASKELL, JOAN A.** (Fels Res. Inst., Yellow Springs, Ohio) **Fat thickness and developmental status in childhood and adolescence.** Amer. J. Dis. Child., 1960, 99, 746-751. The relationship between fat thickness and developmental status during childhood and adolescence was investigated longitudinally on 259 white children, unselected with respect to obesity. From infancy through early adolescence, fat thickness and length were positively correlated. Between 1.5 and 12.5 years children 1 SD above the average in fat were advanced by approximately half a year's growth. Fat thickness at 8.5-9.5 and 12.5-13.5 years was also significantly correlated with hand age. Children who were fatter at 8.5-9.5 years reached menarche and tibial union earlier. The extremes of fatness were characterized by marked differences in the rate of growth, and up to 5 years' difference in menarcheal age. Within the limits of the present study, fat and developmental progress appeared to be linearly related. It was suggested that the asymptotic point beyond

which increased fat is no longer associated with accelerated development must be sought in the clinically obese. —Authors' Summary.

**583.** GEUBELLE, F. (Clinique des Maladies de l'Enfance, Université de Liege, Belgique), KARLBERG, P., KOCH, G., LIND, J., WALLGREN, G., & WEGELIUS, C. *L'aération du poumon chez le nouveau-né.* (Aeration of the lungs in the newborn.) *Biol. Neonatorum*, 1959, **1**, 169-210. The mode of aeration of the lungs after birth was investigated in three ways: (1) studies of the development and magnitude of the functional residual capacity as determined by the helium dilution method, (2) studies of the mechanical forces initiating and maintaining ventilation, utilizing simultaneous recording of volume changes, air-flow changes and intraesophageal pressures and (3) radiological study during the first breath, using both large size serial radiograms and cineradiography. The number of subjects in the various parts of the study varied from 6 to 20. Some measurements were repeated on the same subjects after several hours or days. Both the volume tracings and the helium method indicate that the functional residual capacity develops rapidly during the first hour after birth, with only slight increments during the remainder of the first day or on succeeding days. Functional residual capacity and compliance increased proportionately, and values for either at the end of 24 hours were usually not more than 10 to 20% of the first hour value. Functional residual capacity is positively correlated with birth weight. —D. Eichorn.

**584.** HENDRICKSE, R. G. (Univer. Coll. Hosp., Ibadan, Nigeria), BOYO, A. E., FITZGERALD, P. A., & KUTI, S. R. *Studies on the haemoglobin of newborn Nigerians.* *Brit. med. J.*, 1960, **1**, 611-614. Results of sickling tests, foetal haemoglobin estimations, and paper electrophoresis of the haemoglobin in Nigerian infants at birth and during the first five months of life are presented. "Fast" haemoglobin fractions were found at birth in 11 of 100 cases studied, and persisted for the first two months of life. Three of these were examined in detail and were found to resemble haemoglobin "Bart's" in one case and the haemoglobin of Fessas and Papaspyrou in two. —From Authors' Summary.

**585.** HEPNER, RAY (Univer. Maryland Sch. Med., Baltimore), & BOWEN, MARY. *The placenta and the fetus.* *J. Amer. med. Ass.*, 1960, **172**, 427-432. 40% of placentas in 654 deliveries had gross variations at routine examinations in the delivery room. A statistically significant relationship between placental variations and peculiarities of postnatal growth was seen. Gross examination of the placenta may be a useful clinical tool to forewarn the physician of some common problems of the first six months. This report is the result of the intensive study of a small number of patients. No final conclusions can be stated, save that the relationship of the placenta and the fetus merits further study. —Authors' Summary.

**586.** KULP, J. LAURENCE, SCHULERT, ARTHUR R., & HODGES, ELIZABETH J. (Lamont Geological Observatory, Columbia Univer., Palisades, N.Y.) *Strontium-90 in man IV.* *Science*, 1960, **132**, 448-454. "... The strontium-90 concentration in human bone continued to increase in 1958 and 1959 but the concentration in new bone probably will reach a maximum in 1960. ... The maximum strontium-90 concentration is now found in one-year-olds. In 1959 this average value was 2.1 micromicrocuries per gram of calcium for Western culture areas. The concentration varies markedly with age, in a predictable manner. ... The discrimination factor from mother's diet to fetus appears to be about 12 against strontium as compared with calcium. ... The strontium-90 level in persons who were one year old in 1959 will drop rapidly if there is no further atmospheric contamination. In 1970 these individuals will carry 0.9 micromicrocurie per gram of calcium. ... Previous predictions of strontium-90 levels in diet and bone from tests to date have been high, due to overestimates of the stratospheric reservoir and the stratospheric residence time and an underestimate of the importance of the rate-of fallout factor. Thus, the peak in the diet passed in 1959; the peak in growing bones will pass this year; and the equilibrium level will be lower than had been predicted by a factor of .5 to 10. ...."

**587. MUELLNER, RICHARD S.** (Harvard Med. Sch., Boston, Mass.) **Development of urinary control in children: Some aspects of the cause and treatment of results.** J. Amer. med. Ass., 1960, 172, 1256-1261. A study of the development of urinary control in 1000 children confirmed the belief that bladder control is a self-learned skill, which most children acquire by the age of 4½ years. In the acquisition of urinary control the child learns to coordinate the use of the levator ani, the thoracic diaphragm, and the abdominal musculature, which constitute the "voluntary mechanism" of urination in the adult. Through the use of the "voluntary mechanism" the child doubles its bladder capacity by the age of 4½ as compared to what it was at the age of 2 years. The enlarged bladder capacity insures night control of the urine. Children who fail to enlarge their bladder capacity become enuretic. The author believes that a potential enuretic can be recognized by the age of three years. A simple program which can be used to prevent and to eliminate bedwetting is described. —Journal Summary.

**588. RICHTER, DEREK.** (Whitchurch Hosp., Cardiff) **Protein metabolism of the brain.** Brit. med. J., 1959, 1, 1255-1259. Growth involves the synthesis of the proteins and lipoproteins, which together make up some 90% of the dry weight of the brain. The growth of the brain proceeds ahead of most of the other organs of the body, since it is needed relatively early in life as a controlling center for the neuro-endocrine functions of the body, and in the embryo at 5 days the brain accounts for as much as 30% of the total body weight. The activity of the enzyme systems concerned in protein synthesis is indicated by measurements of the rate of incorporation of amino-acids labeled with radioactive isotopes. The relatively high rate of protein synthesis in the brain gradually recedes until the rate in the brain is similar to that in other tissues, and in the adult animal the rate of incorporation of amino-acids in isolated brain tissue is intermediate between that of heart muscle and liver. Many enzyme systems, such as those concerned in the synthesis of cholesterol, disappear with the cessation of growth. The changes in metabolism may be considered in terms of ascending and descending curves of enzyme activity, which effect a gradual change from one metabolic pattern to another as the "metabolism of growth" is replaced by that of the mature cells in the functionally active centers of the brain. The conditions required for the optimal growth of the brain during the fetal and postnatal periods are not yet clearly understood, but it would appear that environmental factors affecting the protein metabolism may be concerned in the causation of some of the neurological conditions. . . . It is known that under special conditions, where there is a deficiency of glucose, the brain is able to utilize protein as an alternative source of energy, and recent investigation has suggested that the metabolism of functionally active neurones differs from the resting metabolism in that there is a preferential utilization of amino-acids. The active synthesis of protein in the neurosecretory cells of the hypothalamus is now well established, and these observations suggest that there may be an active utilization of protein associated with functional activity in other parts of the brain. —(Dig. Neurol. Psychiat., 28).

**589. SMITH, CLEMENT A.** (Harvard Med. Sch., Boston, Mass.) **Overuse of milk in the diets of infants and children.** J. Amer. med. Ass., 1960, 172, 567-569. Overemphasis on a single food or nutrient to the neglect of others is to be avoided. Milk is occasionally fed to infants or children in such excessive amounts that other essential foods, notably those providing iron, may be excluded. Milk as a food for the growing child should be considered only as to interrelationships of the child's protein, calcium, and iron needs and the amounts of these nutrients in milk. —I. Altman.

**590. STERN, LEO, & LIND, JOHN.** (Wenner-Gren Res. Lab., Stockholm, Sweden) **The electrocardiogram at birth.** Biol. Neonatorum, 1960, 2, 34-38. Standard 3 limb lead ECG's were obtained from 10 full-term infants within the first 30 seconds after birth. An attempt was made to get a tracing both before and immediately after the first cry. Another tracing was obtained one-half to one hour

later. Prominent Q waves in Leads II and III, as reported by previous investigators, were observed. Comparison of records before and after the first breath indicated no significant changes in size and shape of P waves, QRS or T wave pattern, electrical QRS axis, A-V conduction, and rhythm. Although the ECG did not seem to be immediately influenced by the onset of pulmonary respiration, infants who had difficulty in breathing immediately after birth showed a significant deviation of the electrical axis (AQRS) to the right. —D. H. Eichorn.

**591. STERNBACH, RICHARD A.** (Massachusetts General Hosp., Boston) **A comparative analysis of autonomic responses in startle.** *Psychosom. Med.*, 1960, **22**, 204-210. An analysis of the autonomic responses in the startle pattern was made by comparison to patterns reported in other studies on cold pressor stimulation, exercise, and infused norepinephrine and epinephrine. 42 male undergraduates served as subjects in the present study. The following variables were recorded: systolic and diastolic blood pressures; finger, face and axillary temperatures; palmar and volar forearm skin conductances; heart and respiration rates, finger pulse volume; and stomach motility. Startle was found different from cold pressor, exercise, and norepinephrine, but similar to epinephrine in direction of responses. It was concluded that Canon's concept of "emergency" reactions involving undifferentiated massive discharge of the sympathetic nervous system should be regarded only as a first approximation. The startle pattern suggests a somewhat general activation of the sympathetic nervous system, but with possible parasympatheticlike activity reflected by stomach contraction period. —Author's Summary.

**592. WALKER, C. W.** (Dept. Human Ecology, Cambridge), & **PYE, B. G.** **The length of the human umbilical cord.** *Brit. med. J.*, 1960, **1**, 546-548. The mean length of the umbilical cord in 177 deliveries was 21.3 inches with a range from 7 to 48 inches. Male babies had slightly longer cords (22.2 inches) than female babies (20.5 inches). The length of the umbilical cord appeared to be unrelated to such factors as parity, age of mother, height of mother, weight of child, length of child and duration of pregnancy. Statistics seemed to indicate that growth in cord length does not occur after 28 weeks of gestation. —W. W. Sutow.

**593. WILKINS, LAWSON.** (Johns Hopkins Univer. Sch. Med., Baltimore, Md.) **Masculinization of female fetus due to use of orally given progestins.** *J. Amer. med. Ass.*, 1960, **172**, 1028-1032. 70 cases of fetal masculinization of female infants associated with the oral administration of progestins to their mother are analyzed. Purpose of the progestins was to treat habitual or threatened abortion. In 25 cases the mothers were given estrogens with the progestins in order to offset the virilizing effect of the latter, but the evidence indicates that the estrogens failed to do so. Methods of treatment are indicated. —I. Altman.

**594. WOOLLEY, PAUL V., Jr., & VALDECANAS, LETICIA Q.** (Wayne State Univer., Detroit, Mich.) **Growth of premature infants.** *Amer. J. Dis. Child.*, 1960, **99**, 642-647. Tables and figures are presented for circumferential growth of the head and over-all body length during the first year in babies with birth weights between 2 and 5 lb. There is a constant relationship between body length and head circumference, regardless of age or birth weight, during this period. —Authors' Summary and Conclusion.

#### CLINICAL MEDICINE AND PATHOLOGY

**595. ALLEN, DONALD M., DIAMOND, LOUIS K., & HOWELL, DORIS A.** (Children's Hosp., Boston, Mass.) **Anaphylactoid purpura in children (Schönlein-Henoch Syndrome).** *Amer. J. Dis. Child.*, 1960, **99**, 833-854. In a review of 131 cases of anaphylactoid purpura in children, the clinical features, laboratory findings, course, treatment and complications of this disease have been studied. 74 of these



children were seen for follow-up renal function studies from 6 months to 10 years after their original disease. 21, or 28.5%, showed some degree of abnormality. Two others died as a direct result of their nephritis. Attention is called particularly to the abdominal symptoms, the least serious being cramps only, the more serious melena, and the most serious, signs of obstruction, usually caused by intussusception and demanding immediate operative relief. Certain points in therapy, particularly the proper use of corticosteroids, are emphasized. Anaphylactoid purpura is an important disease in childhood because of its increasing incidence. Early recognition and proper management may reduce its hazards. —Authors' Summary and Conclusions.

**596.** ANDERSEN, SHIRLEY RUTH (New York Univer.-Bellevue Med. Center, New York City), & SMITH, MARGARET H. D. **The Heaf Multiple Puncture Tuberculin Test.** *Amer. J. Dis. Child.*, 1960, **99**, 764-769. To 711 Bellevue Hospital Clinic and general ward patients between the ages of 1 month and 15 years Heaf tests were given on one forearm and intradermal 5 TU Mantoux tests on the other, and the patients were subsequently seen for reading of the tests. The Heaf test picked up all 48 patients who reacted to the 5 TU Mantoux test. In addition 22 patients were Heaf doubtful or positive although negative to the 5 TU Mantoux test. Of these 17 were tested with 100 TU and 250 TU, and 13 were positive. Thus the Heaf test appeared highly specific, though more sensitive than the 5 TU Mantoux. Omitting from consideration the Heaf tests which were only "questionable 1+," there were still 13 patients with positive Heaf and negative Mantoux 5 TU. The intensity of the positive reactions to both tests was roughly parallel for the smaller reactions. In persons with marked sensitivity to tuberculin, the Heaf test produced less unpleasant reactions than the Mantoux test. The simple equipment needed for the Heaf test, the relative ease of its administration, the stability of the glycerinated PPD (Protoderm) employed, and the absence of false negative tests render it the most satisfactory tuberculin test presently available for tuberculin testing large numbers of persons. —Authors' Summary and Conclusions.

**597.** BAIN, A. D. (Royal Hosp. for Sick Children, Edinburgh), & SCOTT, J. S. **Renal agenesis and severe urinary tract dysplasia. A review of 50 cases, with particular reference to the associated anomalies.** *Brit. med. J.*, 1960, **1**, 841-846. 50 cases of severe urinary tract dysplasia are reviewed (28 of bilateral renal agenesis and 22 of other anomalies incompatible with micturition). The characteristic clinical and pathological features are described. The characteristic facies was present in 40 of the cases, while flattened spade-like hands and a peculiar nodular appearance of the amnion—"amnion nodosum"—were other common features. Pulmonary hypoplasia was a constant finding and is the usual cause of death. The cause of the associated anomalies is discussed. A genetic factor appears to operate, but many of the features are evidently a consequence of oligohydramnios. Oligohydramnios accounts for the amniotic lesions, the talipes, some of the facial features, the high incidence of breech presentation, and the radiologic appearances. —From Authors' Summary.

**598.** BOBATH, K. (Western Cerebral Palsy Centre, London) **The neuropathology of cerebral palsy and its importance in treatment and diagnosis.** *Cerebral Palsy Bull.*, 1959, No. 8, 13-33. The condition known in the Anglo-Saxon world as cerebral palsy is defined, and its aetiology, incidence and classification are briefly surveyed. The neuropathology is described in detail. Cerebral palsy is caused by a lack of inhibitory control, leading to a disturbance of the postural reflex mechanism, with release of the tonic reflexes of Magnus and de Kleijn. The relevant reflexes and their influence on the motor behavior of the child with cerebral palsy are described, and their value for early diagnosis and assessment is stressed. Treatment should be approached on neurological lines, the aims being to inhibit abnormal reflex activity and facilitate normal automatic reactions. —Author's Summary.

**599.** CARPENTER, EARNEST B. (Crippled Children's Hosp., Richmond, Va.), & POWELL, DOUGLAS O. **Osteochondrosis of capital epiphysis of femur (Legg-**

**Calve-Perthes disease): Long-term results in ninety patients.** J. Amer. med. Ass., 1960, 172, 525-527. Clinical impressions of this disease are presented, based on 90 children, 76 boys and 14 girls, treated at the Crippled Children's Hospital in Richmond, Va. Some of these children were followed up as long as 25 years after treatment. In very young children, early diagnosis plus absence of weight-bearing gave excellent end results. In patients over 8 years of age, end results were poor regardless of type of treatment. The most effective method of restriction of weight-bearing was bed rest with Buck's extension. —I. Altman.

**600. CROME, L.** (Fountain Hosp., London) **The brain and mental retardation.** Brit. med. J., 1960, 1, 897-904. The morphological findings in 282 brains obtained at necropsy from mental defectives and other mentally retarded individuals, mostly of low grade, fell into two groups: 91 (32.3%) were classified as recognized syndromes with characteristic clinical and pathological disease patterns; and 191 (67.7%) could not be so classified. The neuromorphological features of both groups are briefly described. Most cases showed gross and obvious neural abnormalities but there were noteworthy exceptions. In the group of the classified syndromes a few, such as phenylketonuria and cretinism, are known to be associated with only inconstant and doubtful neural lesions, even though many of the phenylketonuric brains are small. Of the 191 unclassified cases only 8 showed no morphological change, while 16 others presented only some micrencephaly, the weights of the brains ranging from 70 to 88% of the average normal for age. The study thus confirms the widely held view that severe mental retardation is usually associated with encephalopathy. —From Author's Summary.

**601. DENNIS, JAMES L.** (Children's Hosp. of East Bay, Oakland, Calif.), **PALMER, W. MARTIN, & CLEVELAND, ROBERT W. Bronchiolitis in infants: Problem in practice.** J. Amer. med. Ass., 1960, 172, 688-691. Bronchiolitis is a general term applicable to any inflammation of the bronchioles. During the period 1947-1957, bronchiolitis was exceeded only by diarrhea as a cause for admission to the infant wards of the Children's Hospital of the East Bay. The authors' review of clinical features and treatment is based on 1200 cases. The disease nearly always results from an infection, usually a virus, "producing a typical age-group response to a simple respiratory infection that only mildly inconveniences the adult. . . . The infant with a single episode of infectious bronchiolitis is quite unlikely to develop asthma in later life, but most asthmatic children have been subject to attacks of bronchiolitis as infants. . . . treatment should be directed toward general supportive measures and the prevention of potentially fatal complications the most common being bronchopneumonia, right heart failure, fluid and electrolyte imbalance, and iatrogenic drug intoxication." —I. Altman.

**602. DI SANT'AGNESE, PAUL E. A.** (Columbia Univer., New York City) **Salt depletion in cold weather in infants with cystic fibrosis of the pancreas.** J. Amer. med. Ass., 1960, 172, 2014-2021. While patients with cystic fibrosis are known to be unusually susceptible to hot weather, it is not as well known that under some circumstances such infants may be prone to salt depletion and dehydration with serious consequences even in cold weather. Five cases are presented, ranging in age from 4 weeks to 16 months. As soon as this diagnosis is suspected, supplemental amounts of sodium chloride should be added to the diet. Special attention should be paid to the electrolyte balance when even minor degrees of vomiting develop. Cystic fibrosis of the pancreas should be kept in mind in the differential diagnosis of hypoelectrolytemia and dehydration in infancy. —I. Altman.

**603. DI SANT'AGNESE, PAUL E. A.** (Columbia Univer., New York City), & **VIDAURETTA, ALFREDO M. Cystic fibrosis of the pancreas.** J. Amer. med. Ass., 1960, 172, 2065-2072. Cystic fibrosis of the pancreas is now observed with increasing frequency in children, adolescents, and young adults. It is recognized, despite its name, as a generalized disturbance in the function of exocrine glands. It is an hereditary disease, thought to be transmitted as a recessive trait; it is rare



among Negroes and has never been described in mongoloid patients. In the fully manifested (homozygotic) form, it occurs in about one of every 1,000 live births, and from 2 to as high as 20% of the population have been estimated to carry the recessive gene. Diagnosis is described. Prognosis depends on the severity of the lung involvement. Mortality has been high in the 550 patients seen at Babies Hospital in New York since 1939. Only 106 have survived beyond the age of 10 years, the oldest to the age of 24 years. —I. Altman.

**604. DOMINGUEZ, RAFAEL** (St. Luke's Hosp., Cleveland, Ohio), **SEGAL, ABRAHAM J., & O'SULLIVAN, JOHN A.** **Leukocytic infiltration of the umbilical cord: Manifestation of fetal hypoxia due to reduction of blood flow in the cord.** J. Amer. med. Ass., 1960, **173**, 346-349. This is a report of a correlated clinical and pathological investigation into the significance of leukocytic infiltration of the umbilical cord in 1,000 consecutive deliveries at Saint Luke's Hospital. Leukocytic infiltration of the umbilical vein (with or without infiltration of the umbilical arteries) was found in 245 of 986 single births (24.8%). A significant association occurred between leukocytic infiltration of the cord and (a) prolonged labor, (b) meconium staining of the amniotic fluid, and (c) positional abnormalities of the cord. A suggestive association occurred between leukocytic infiltration of the cord and (a) general inhalation anesthesia as compared with noninhalation anesthesia, (b) grand multiparity, and (c) marked slowing or acceleration of the fetal heart rate. Our observations led us to conclude that leukocytic infiltration of the umbilical cord is due to interference with the normal flow of blood in the umbilical vessels and that it is a more sensitive indicator of fetal distress due to hypoxia than are abnormalities of the fetal heart rate and rhythm or clinical recognition of meconium staining of the amniotic fluid. It is suggested that the examination of the umbilical cord for leukocytic infiltration affords a means for a long-term study of children to determine the effect of intrauterine hypoxia on their ultimate growth and development. —Authors' Summary and Conclusions.

**605. ENSIGN, PAUL R.** (City-County Hlth Dept., Great Falls, Mont.), **URBANICH, EDWARD M., & MORAN, MABEL.** **Prophylaxis for otitis media in an Indian population.** Amer. J. publ. Hlth, 1960, **50**, 195-199. Because of the high incidence of draining ears in Indian children, a remedy was sought. There were 124 children in the study, 95 who had not had draining ears previously and 29 with a history of draining ears. The drug used was Sulfamethoxypyridazine. Among 34 who took the medication regularly, none had draining ears or earaches. Of 18 in the group with draining ears in previous years who took the medication regularly, 15 had no otitis media this year. The entire study group, whether or not they took the medication regularly, had only 6.6% (8 of 120, 4 others could not be followed) with draining ears, while the control group had 15% (20 of 130). —I. Altman.

**606. FERGUSON, DONALD J.** (Veterans Administration Hosp., Minneapolis, Minn.), **ADAMS, PAUL, & WATSON, DAVID.** **Pulmonary arteriosclerosis in transposition of the great vessels.** Amer. J. Dis. Child., 1960, **99**, 653-661. Cross sections of 1561 pulmonary arterial vessels in eight size ranges from patients dying with transposition of the great vessels were measured and compared with 2169 vessels from normal lungs. Patients were grouped into six age ranges between birth and 34 months. Patients with transposition retain the newborn structure of pulmonary arteries for about three months, while normal infants show a rapid thinning-out of arterial walls during this period. After three months, the transposition group develops further thickening of the arteries, while the opposite trend continues in normals. When there is pulmonic stenosis, in addition to transposition, the pulmonary arteries are normal or thinner-walled than normal. —Authors' Summary.

**607. GARFIELD, S. L.** (Univer. Nebraska Coll. Med., Omaha), & **CARVER, M. J.** **Phenylketonuria: a further study.** J. nerv. ment. Dis., 1960, **130**, 120-124. A study of 21 cases of phenylketonuria (phenylpyruvic oligophrenia) was reported and comparisons made with previous findings in the literature. While there were some

slight deviations, in general, the present results are in agreement with those reported previously. Most of the patients are severely retarded, only a few can communicate verbally, and there is no one personality or behavioral pattern which can be said to characterize the group. Clearly there is a need for a state or nation-wide system of early diagnosis and screening to locate cases with phenylketonuria as soon as possible. While low phenylalanine diets appear promising as a means of treatment for cases discovered relatively shortly after birth, more research is needed to evaluate the long-term effectiveness of such treatment. —Authors' Summary.

**608. HARRIS, LLOYD E.** (Mayo Clinic, Rochester, Minn.), **LIPSCOMB, PAUL R., & HODGSON, JOHN R.** **Early diagnosis of congenital dysplasia and congenital dislocation of the hip: Value of the abduction test.** *J. Amer. med. Ass.*, 1960, **173**, 229-233. Results are reported on the use of the abduction test as a screening technique for detection of congenital disease of the hip. The test was made a part of the routine neonatal examination of 11,010 infants born between January 1, 1949 and December 31, 1955. All infants were examined during the first day of life, on the fifth day, and about 90% at regular intervals for six years in well-child clinics. Average age at diagnosis of congenital dysplasia with dislocation was reduced from 14 to 4 months, with no dislocations being undiscovered prior to the weight-bearing age. It is concluded that at present the abduction test seems to be the most easily applied test for the purpose of early detection. "It is simple to perform and requires a minimal degree of experience for adequate interpretation." —I. Altman.

**609. HAYLES, ALVIN B.** (Mayo Clinic, Rochester, Minn.), **COWGER, MARYLYN L., SALASSA, ROBERT M., PRATT, JOSEPH HYDE, & DOCKERTY, MALCOLM B.** **Hirsutism in adolescent girls.** *Amer. J. Dis. Child.*, 1960, **100**, 55-65. Three girls aged 13, 13, and 14 years who presented an unusual clinical picture consisting of hirsutism, obesity, menstrual disturbance, and, in two instances, enlargement of the clitoris, are reported on. Adrenal cortical function as indicated by the urinary excretion of 17-ketosteroids, corticosteroids, and pregnanetriol was normal in each patient. Abdominal exploration in each instance revealed the presence of large polycystic ovaries, but no evidence of adrenal or ovarian neoplasm. Wedge resection of the ovaries and treatment with prednisone or a similar steroid failed to alter the menstrual irregularity or hirsutism of the patients. The syndrome of Stein-Leventhal should be considered a possible cause for hirsutism or mild virilization in the adolescent girl. —Authors' Summary.

**610. HAYLES, ALVIN B.** (Mayo Clinic, Rochester, Minn.), **KENNEDY, ROGER L. J., BEAHR, OLIVER H., & WOOLNER, LEWIS B.** **Management of the child with thyroidal carcinoma.** *J. Amer. med. Ass.*, 1960, **173**, 21-28. A series of 59 cases seen at the Mayo Clinic are described. There were 40 girls and 19 boys, a ratio of 2:1. The disease should be suspected in any child with nodular goiter or persistent cervical adenopathy. Method of treatment depends on the type and extent of the carcinoma. Treatment of choice is surgical excision when the lesion is considered operable. Other therapy is described. —I. Altman.

**611. JACOBS, BERNARD W.** (Hosp. for Special Surgery, New York City) **Early recognition of osteochondrosis of capital epiphysis of femur.** *J. Amer. med. Ass.*, 1960, **172**, 527-531. A comparison was made between 54 patients with osteochondrosis of the capital femoral epiphysis and 25 with synovitis of the hip. All of the former group limped, 51 had restricted hip motion, and 48 complained of pain. All of the patients with synovitis limped also, 21 had restricted hip motion, and 19 complained of pain. The two entities were clinically indistinguishable except that roentgenographic findings were characteristic in osteochondrosis and recovery from it was slower. Of the 25 patients with synovitis, 22 ultimately became asymptomatic after treatment with bed rest with light traction. The remaining three later developed osteochondrosis. It is likely that synovitis predisposes the patient to osteochondrosis or is the first stage in its development. Therefore children with clinical, but without roentgenologic, evidence of hip disease should be watched for signs of osteochondrosis of the capital femoral epiphysis. —Journal Summary.

**612. KIESEWETTER, W. B.** (Univer. Pittsburgh Sch. Med., Pa.), & **MASON, EDWARD J.** **Malignant tumors in childhood.** J. Amer. med. Ass., 1960, **172**, 1117-1121. Malignant disease was diagnosed in 404 of 38,967 children admitted to a hospital during 6½ years. In children less than one year old, renal and adeno-sympathetic tumors were the most frequent type. Thereafter leukemia and lymphoma predominated until the age of 8 years. In the 10-to-13-year age groups, inclusive, tumors of the central nervous system and eye predominated. 12 cases of bone tumor were observed, all in children past their second birthday. About one-third of the 404 patients came to medical attention because of a mass. The most frequent error at the initial examination was a diagnosis of upper respiratory infection. The two types of malignancy most frequently misdiagnosed were Hodgkin's disease and neuroblastoma. The fact that 75% of those who died from malignant disease were dead at the end of the first 12 months indicates the need for prompt action when the diagnosis is made. —Journal Summary.

**613. KOVE, SIMON** (138-15 77th Ave., Kew Garden Hills, N.Y.), **PERRY, RALPH,** & **WROBLEWSKI, FELIX.** **Diagnosis of neonatal jaundice by patterns of serum transaminase.** Amer. J. Dis. Child., 1960, **100**, 71-92. The present investigation is an extension of previous studies of serum transaminase activity in neonatal jaundice. Serial measurements of serum transaminase activity were obtained in infants with neonatal jaundice due to a variety of causes. The data resulting from the present investigation have been summarized with those of previous studies, and patterns of enzyme activity have been elaborated for the varied conditions involved in the etiology of neonatal jaundice. The results of these studies appear to indicate that the technique of serial measurements of serum transaminase activity may be a valuable diagnostic aid in the differential diagnosis of jaundice in the newborn infant. As an important practical application of this procedure, the diagnosis of congenital surgical neonatal jaundice may be facilitated, thereby permitting early repair in those infants in whom the biliary obstruction is correctable. By the same token it may prevent potentially dangerous surgical intervention in infants with medical neonatal jaundice. —Authors' Summary and Conclusions.

**614. MURTAUGH, FREDERICH** (Temple Univer. Med. Center, Philadelphia, Pa.), & **KIRKPATRICK, JOHN A.** **Diagnostic approach to the infant with an enlarging head.** J. Amer. med. Ass., 1960, **172**, 538-541. Intracranial disease involving the cerebrum in infants does not usually produce alteration in the infant's neurological function. The first sign of intracranial disease may be progressive abnormal enlargement of the head. The definitive diagnosis of the mechanisms of head enlargement is obtained by (1) routine roentgenologic examination of the skull; (2) investigation of the subdural space by subdural tap; and (3) contrast air studies of the ventricular system and subarachnoid pathways, by either ventriculography or pneumoencephalography. —Authors' Summary.

**615. NALEBUFF, EDWARD A.** (Lakeville State San., Middleboro, Mass.), & **NORTON, PAUL L.** **Congenital dislocation of the hip: Studies in the early walking group.** J. Amer. med. Ass., 1960, **172**, 1245-1251. Data are reported on 21 patients, 1 to 3 years old, to stress the importance of early discovery and treatment. 10 of the patients had bilateral involvement. "An initial closed reduction followed by immobilization in abduction—internal rotation and combined with rotation osteotomy in selected cases has consistently given us a high percentage of satisfactory results. Therefore, we recommend this treatment as the preferred method in this age group." —I. Altman.

**616. NEWMAN, C. G. H.** (Hosp. for Sick Children, London) **Long-term follow-up of 32 patients irradiated for thymic enlargement in infancy.** Brit. med. J., 1960, **1**, 34-36. 32 patients who received irradiation for suspected thymic enlargement in infancy between 1932 and 1950 are reviewed. 31 of these have been traced. Three have died, one possibly from the acute effects of radiation. One case developed a nodular goitre 22 years after the irradiation, another had slight enlargement of the

thyroid at the age of 17, and another had a neurilemmoma removed from the neck at the age of 14. There were no cases of leukemia. —Author's Summary.

**617. RAPMUND, GARRISON, BOWMAN, JOHN M., & HARRIS, RUTH C.** (Babies Hospital, New York City) **Bilirubinemia in nonerythroblastotic premature infants.** *Amer. J. Dis. Child.*, 1960, **99**, 604-616. More than 10% (18 patients) of a series of 171 premature infants who survived longer than 48 hours developed peak plasma total bilirubin concentrations exceeding 20.0 mg. per 100 ml. The great majority (16) of these infants developed neither clinical nor pathological signs of kernicterus. Higher bilirubin values were observed in infants of lowest birth weight, in "white" in contrast to "Negro," and in male infants. The low incidence of kernicterus observed in this study could not be correlated with any of the above noted factors. We were unable to demonstrate the existence of a critical peak concentration of plasma bilirubin in premature infants above which kernicterus could be expected to develop. We recommend that the use of exchange transfusions to lower plasma bilirubin concentrations in nonerythroblastotic, hyperbilirubinemic premature infants should be dependent on the individual status of the infant and the availability of adequate facilities for replacement rather than a routine procedure. —Authors' Summary and Conclusions.

**618. SORSBY, A.** (Royal Coll. Surgeons & Royal Eye Hosp., London), & **WILLIAMS, C. E.** **Retinal aplasia as a clinical entity.** *Brit. med. J.*, 1960, **1**, 293-297. An account is given of two family groups in which blindness was present early in infancy and in all probability from birth. The eyes are normally formed and the media clear; ophthalmoscopically the initial findings are of either a normal or slightly pale disk, and some mottling of the fundus background. While the blindness is generally total from the beginning, the ophthalmoscopic features progress throughout life, giving crude pigmentary reactions of the chorio-retinitis type and well-established retinal atrophy. In one family the mode of inheritance was clearly dominant; in the second family it was in all probability recessive. In the first family the two affected children in the third generation showed gross mental defect. In the second family only one of the four affected sibs showed a mental anomaly, and that slight. The brain and the eyes of the older of the two children in the first family came to necropsy. The brain showed no gross macroscopic anomalies; the retina was disorganized beyond the possibility of recognizing individual layers. The brain is being subjected to a more detailed study. It is suggested that the blindness recorded here is determined by a failure of the retina to develop into a functioning tissue—aplasia of the retina—and that this undeveloped retina subsequently undergoes secondary degenerative changes. Attention is drawn to a possible parallel with the changes in the more fully developed retina seen in retinal dystrophy—a genetically determined retinal degeneration—in some strains of mice, rats, and the Irish setter. —From Authors' Summary.

**619. TARJAN, GEORGE.** (Pacific State Hosp., Pomona, Calif.) **Research in mental deficiency with emphasis on etiology.** *Bull. Menninger Clinic*, 1960, **24**, 57-69. This paper attempts to point out the various areas of research in mental deficiency. It distinguishes two basic categories: the "physiological" and "pathological" groups which influence the planning of etiological research. Biochemical investigations are reported in detail. The discovery of an inborn error of metabolism stimulated studies of carriers. These new findings will shed light on the causation of mongolism. The author sees the relationship between the childhood schizophrenias and the mental deficiencies as a research challenge of its own. Very likely there exists a group of combined conditions. —E. N. Plank.

**620. VAHLQUIST, BO.** (Univer. Hosp., Uppsala, Sweden) **Neonatal immunity.** *Amer. J. Dis. Child.*, 1960, **99**, 729-734. A survey is given of the immunity situation from a clinical point of view during the first few months of life, the transfer of antibodies from mother to child, and the capacity for active antibody formation in early life. —Author's Summary.

## PSYCHOLOGY

621. ALPER, ARTHUR E., & HORNE, BETTY M. (Sunland Training Center, Gainesville, Florida) **Changes in IQ of a group of institutionalized mental defectives over a period of two decades.** *Amer. J. ment. Def.*, 1959, 64, 472-475. The scores of a group of 50 mentally retarded persons on the 1916 Binet were compared with their scores on the WAIS after an average interval of 25 years. Results indicated that even though there may be considerable shifting of scores within a narrow range, extreme shifts are few in number. There is no evidence to indicate a decrease in mental level of retardates after prolonged institutionalization. —From Authors' Summary.
622. ATKINSON, R. C. (Univer. of California, Los Angeles), SOMMER, G. R., & STERMAN, M. B. **Decision making by children as a function of amount of reinforcement.** *Psychol. Rep.*, 1960, 6, 299-306. This study examined the effect of varying amounts of "verbal" reinforcement in a situation involving predictions by 63 fifth and sixth grade children of a binary sequence of events. The analysis of data is in terms of a linear stochastic learning model. There was good agreement between theoretical and observed values on asymptotic response probabilities, in fact, learning parameters characterizing amount of reinforcement were remarkably stable for different reinforcement schedules. However, an analysis of the sequential data indicated difficulties with the model. —Authors' Summary.
623. BAER, DONALD M. (Univer. of Washington, Seattle) **Escape and avoidance response of preschool children to two schedules of reinforcement withdrawal.** *J. exp. anal. Behav.*, 1960, 3, 155-159. "The present study represents a beginning at implementing avoidance techniques for children, and an exploration of possibly significant variations in the way an aversive event may be programmed by a response. The aversive event used is the temporary withdrawal of positive reinforcement." Ss were preschool children 4 to 6 years old divided into two groups. Apparatus consisted of sound motion picture equipment and materials and bar pressing equipment suitable for the study of operant responding to movie cartoons. The study was carried out in the Bijou mobile laboratory. All Ss viewed either two or three cartoons without interruption during the first session. During the second session the cartoons played for one minute before the first interruption and were then interrupted until the subject responded to the bar. One group of 16 children received repeated applications of the "Hefferline escape-avoidance schedule" (any response automatically programmed the next interruption for  $n$  seconds later, but, if another response was made before  $n$  seconds elapsed, the interruption was reprogrammed for  $n$  seconds after this last response). Another group, consisting of 17 children, received repeated application of the "escalator" schedule (any response added  $n$  seconds to the interval between that response and the next programmed interruption). The results indicate that the "escalator" schedule appears advantageous in promoting the rapid development of avoidance responding. —L. E. Dameron.
624. BAROFF, GEORGE S. (N. Y. State Psychiatric Inst., New York City) **WISC patterning in endogenous mental deficiency.** *Amer. J. ment. Def.*, 1959, 64, 482-485. 53 non-brain-injured retardates were tested with the WISC. Various comparisons were made between subtests, both for the total sample and a small Negro subsample. —From Author's Summary.
625. BELL, RICHARD Q. (Nat'l Inst. Mental Hlth, Bethesda, Md.) **Relations between behavior manifestations in the human neonate.** *Child Developm.*, 1960, 31, 463-477. 37 measures of behavior were obtained from film records made approximately 96 hours following delivery for each of 32 male infants selected as showing no evidence of perinatal complications. Anthropometric indices were added to these

measures; intercorrelations were computed and subjected to a factor analysis. Five orthogonal factors which emerged were identified as Arousal, Depth of Sleep, Tactile Sensitivity-Strength, Oral Integration, and Fetal Position. 22 measures of manifestly quite different behavior manifestations could be located in a quadrant between the two axes represented by Arousal and Depth of Sleep. It was suggested that many behaviors of the infant as this age are merely manifestations of level of arousal. The latter is assumed to be a joint function of temporary states of disturbance in the infant and more stable processes involving depth of sleep. Activity while asleep and awake appeared to represent two different processes rather than a single unitary process. Differences between infants on the Tactile-Strength factor may be of importance for later development because there is evidence that underlying components are sufficiently matured to show some continuity over time. Evidence for a possible sex linkage in this factor is summarized. Factorial structure was not consistent with the concept of a single sensory barrier or with the notion that all oral processes in the infant represent some single unitary entity. —Author's Abstract.

**626. BIELIAUSKAS, VYTAUTAS J.** (Xavier Univer.) **Sexual identification in children's drawings of human figure.** *J. clin. Psychol.*, 1960, **16**, 42-44. 1000 human figure drawings of the H-T-P produced by children age 4 years through 14 years and 11 months were examined as to the sex of the person drawn. Three categories were used in this evaluation: male, female and undifferentiated. The data were evaluated by the chi-square technique for each age group and for the total population. Graphic presentation of developmental trends was prepared in terms of frequency polygons. The results suggested that in general both sexes at all ages prefer to draw a person of their own sex. This tendency seemed to increase with age, particularly after the age of 9. The developmental pattern showed more stability in the case of boys as compared to the girls. The over-all findings of this study seem to provide strong support for the sexual identification hypothesis as it is applied to human figure drawings. —Author's Summary.

**627. BIJOU, SIDNEY W.** (Univer. of Washington, Seattle), & **OBLINGER, BARBARA.** **Responses of normal and retarded children as a function of the experimental situation.** *Psychol. Rep.*, 1960, **6**, 447-454. This study investigated the number of responses (dropping a ball in a hole) given by children as related to age, sex, IQ, socioeconomic status of family, and mode of residence in a performance arrangement in which the reinforcing properties of stimuli were contained in the fixed physical and social structures of the experimental situation. Three groups of normal and one group of retarded children were used. The groups contained both boys and girls and were taken from a university laboratory school (age range 2-6 to 4-11), a cooperative day-care center (2-6 to 5-5), a private day-care center (2-6 to 6-6) and from a State school for retarded children (6-1 to 11-7). (Ns were 18, 14, 29, and 46, respectively.) The experimental task consisted of putting a ball in the upper hole of the apparatus. Each S was told that he could put the ball in the top hole as many times as he liked. The experiment was terminated when S did not respond for 1 minute. Children from the university school made the fewest responses among the three preschool groups ( $p < .05$ ). The retarded group made the largest number of responses of the four groups and showed greatest variability ( $p < .01$ ). Further analysis of data from the retarded group showed that older children made more responses than the younger; girls made more than the boys. These findings were statistically significant. Suggestions were made of possible causal factors in terms of (1) histories of physical and social deprivations, (2) previous experiences with adults, and (3) the school situation from which Ss were removed at the time of the study. —R. Ware.

**628. BREHM, JACK W.** (Duke Univer., Durham, N. C.) **Increasing cognitive dissonance by a fait accompli.** *J. abnorm. soc. Psychol.*, 1959, **58**, 379-382. This paper presents a study illustrating the effect of a fait accompli on cognitive dissonance. Eighth-grade boys and girls were induced by the promise of a prize to eat disliked vegetables. Some were additionally told, while eating, that their parents would



learn what vegetable they had eaten, with the implication the Ss would have to eat more at home. A questionnaire measured liking for the vegetable before and after the experiment. It was found that the fait accompli of implied further eating produced a greater increase in liking. This experiment therefore further specifies Festinger's concept of cognitive dissonance. In addition, it was found that persons initially least favorable toward the vegetable tended to be most favorable after the experiment. This result was seen as consistent with dissonance theory but not with some other theories of attitude change. —Author's Summary.

**629. BREHM, JACK W., & COHEN, ARTHUR R.** (Duke Univer., Durham, N.C.) **Re-evaluation of choice alternatives as a function of their number and qualitative similarity.** *J. abnorm. soc. Psychol.*, 1959, **58**, 373-378. In order to test two derivations from Festinger's theory of psychological dissonance, sixth-grade school children were given systematically varied choices from among several attractive toys. About half of them were given a choice between two toys, and the remainder were given a choice of one from among four toys. From each of these two groups, about half was given a choice between qualitatively similar toys, while the remainder was given a choice between qualitatively dissimilar toys. Ss were asked, both before and after the choice, to indicate on a 51-point graphic rating scale how much they liked each of the toys. The two derivations tested were: the magnitude of dissonance and consequent amount of increased liking for the chosen alternative and decreased liking for the unchosen alternative increases with (a) the qualitative dissimilarity of alternatives, and (b) the number of alternatives. The first of these was confirmed; the second received somewhat questionable support. Changes in liking for the third and fourth unchosen alternatives failed to support our expectations. Two explanations for this failure were suggested. —Authors' Summary.

**630. BREHMER, INGRID.** (Univer. of Stockholm, Sweden) **Eine Untersuchung der Zuverlässigkeit des Farbpyramiden-Tests.** (An investigation of the reliability of the color-pyramid-test.) *Psychol. Rdsch.*, 1960, **11**, 109-118. The reliability of the Farbpyramiden-Test (FPT) by Heiss-Hiltmann was investigated with 45 male (median age 24.3) and 60 female students (median age 20.3) of a Swedish people's high school. The students were tested twice with a 5-week interval. The average reliability for 10 colors was .41 for the male and .55 for the female population (range —.04 to .84). The author concludes that the test has a fairly high reliability and that selection of colors on the FPT does not occur arbitrarily but that color preference remains fairly stable over a period of time. An investigation of the validity using ratings by members of the peer group as criteria did not demonstrate a substantial relationship between the FPT scores and the criterion variable. —R. E. Muuss.

**631. BRILL, RICHARD G.** (Calif. Sch. for Deaf, Riverside) **A study in adjustment of 3 groups of deaf children.** *Except. Child.*, 1960, **26**, 464-466, 470. Rated differences in adjustment between matched groups of deaf children from families with deaf parents, normal parents but one or more deaf siblings, and normal parents and normal siblings, are reported. —J. W. Fleming.

**632. BRONSON, WANDA C.** (Univer. of California, Berkeley) **Dimensions of ego and infantile identification.** *J. Pers.*, 1959, **27**, 532-545. This investigation was an attempt to distinguish the effects of ego and infantile identification with the father upon boys' masculine behaviors and attitudes during preadolescence. Consideration of the psychoanalytic theory of identification led to the following specific predictions: (a) ego identification with a nonstressful father should result in acceptance on a covert level of masculine attitudes and needs, overt behavior characterized by "moderation," and a moderate similarity between the son's and father's masculine behavioral patterns; (b) infantile identification with a stressful father should result in rejection of masculine attitudes on a covert level, extreme masculine or extreme nonmasculine overt behaviors, and a high degree of similarity or high degree of dissimilarity between sons of father's masculine behavior. A sample of 42 boys

(9 to 13 years), and their fathers, were drawn from participating families of the Guidance Study of the Institute of Human Development for testing these predictions. Two major dimensions (undemonstrative-demonstrative, straining-easy) of father-son relations were derived from descriptive codings of behavior reported by the mother, as well as other secondary informants. Overt masculine behavior was derived from Honzik's toy preference play situation. Covert masculine behavior was derived from TAT protocols coded for independent striving, controlled aggression, and dependence frustration. Father's overt masculine behavior, as perceived by others, was obtained from ratings (85% agreement) made at the time of this investigation. Results of the study "lent clear support to the predictions concerning overt and covert masculinity behaviors characteristic of boys who have established ego identifications with the father and of those for whom infantile identifications have presumably prevailed." —C. D. Smock.

**633. BURSTEIN, ALVIN G.** (Univer. of Chicago, Ill.) **Primary process in children as a function of age.** *J. abnorm. soc. Psychol.*, 1959, **59**, 284-286. The purpose was to test the hypothesis that the tendency to confuse opposites and identicals in the language area would be greater in the case of younger children than in older children. The sample consisted of 26 third-grade and 27 sixth-grade Ss; each grade had about equal numbers of girls and boys. A 97 item paper-and-pencil test was administered. "On each item S was instructed to select the synonym for a given word from among three alternatives, consisting of a synonym, an antonym, and an irrelevant word." Two basic scores were derived: (a) number of antonym markings minus number of irrelevant markings, defined as "... a relatively pure measure of the distracting effect of the antonyms on this task, that is, a measure of the degree to which synonyms and antonyms are confused" and, (b) the ratio of antonym markings to the difference score given in (a) preceding. Operationally then, it was hypothesized that scores (a) and (b) would be greater for third-graders than for sixth-graders. Tests of statistical significance were applied, and the principal findings confirmed the hypothesis. —H. D. Holloway.

**634. CAPOBIANCO, R. J., & COLE, DOROTHY A.** (Univer. of Minnesota, Minneapolis) **Social behavior of mentally retarded children.** *Amer. J. ment. Def.*, 1960, **64**, 638-651. Comparisons in play behavior were made between institutional and noninstitutional environments, educable and trainable levels of retardation, and male and female children. The subjects ranged in age from about 7 to 12. Play behavior was measured by the social participation scale developed by Parten and Newhall. Significantly higher scores were obtained by educables over trainables, and females over males. Many other results are reported involving these and other variables. —J. W. Fleming.

**635. CATTELL, RAYMOND B.** (Univer. of Illinois, Urbana) **Anxiety, extraversion and other second-order personality factors in children.** *J. Pers.*, 1959, **27**, 464-476. This investigation was designed to determine if the correlations among established primary personality factors in children require the same number of second-order factors as in adults and to determine if these factors appear psychologically similar to those in adults. Further, if the factors differ, can this difference be explained by existing knowledge of psychological development. The High School Personality Questionnaire was administered to two independent samples ( $N = 168$  and 296) of 13-year-old boys and girls. Second order factors were extracted from the correlational matrices using two independent methods: (a) oblique cosign matrix as obtained by simple structure rotation, and (b) actual scale score correlations for the primary personality factors. Results indicated six factors from the two samples were congruent. The first three factors also showed good agreement with the second order adult Personality Factors. Interpretation of the first two factors was identical for children and adults; i.e., extraversion and anxiety. Despite the over-all similarity in the child and adult factor profiles, there were a number of significant differences explainable in terms of trends in psychological development. For example, children are, as expected, less concerned with internal conflict associated with defects of



personality integration, and more with situational threats. Further study of psychological development through factor analytic procedures is recommended. —C. D. Smock.

**636. COUNIHAN, DONALD T. Articulation skills of adolescents and adults with cleft palates.** *J. Speech Hearing Disorders*, 1960, 25, 181-187. 55 operated cleft palate persons, 13 through 23 years, were studied in respect to correct production of 23 consonant elements and 9 consonant blends. 71% of the consonants tested were correctly articulated; nasal emission appeared to be a significant factor in misarticulation. Sounds misarticulated more than 40% of the time were: (z), (s), (j), (tʃ), and dʒ. Sounds correctly articulated 100% of the time were (j), (h), (w), and (m). Cleft palate subjects on the Templin norms were seriously retarded in articulatory skills. On the whole these subjects had greater difficulty with consonant blends than with single consonant elements. —M. F. Palmer.

**637. DANZIGER, KURT.** (Univer. of Cape Town) **Choice of models among Javanese adolescents.** *Psychol. Rep.*, 1960, 6, 346. This paper reports the results of a study of the choice of personality models among 537 Javanese high school students. Subjects were from both rural and urban areas. Ideal personalities chosen by these adolescents were classified into two categories: personalities drawn from the immediate private sphere of experience (family, friends, school) and those drawn from public life (national and community leaders past and present). 35% and 65% of the chosen personalities fell into the former and latter categories, respectively. There was no significant choice change associated with S's age. There was a tendency for choice of model to be associated with family income—Ss from higher income families tending to prefer models from private life (57%). It is suggested that these findings may be related to class differences in child rearing, the highest income group tending to make demands on the child as an individual while the other groups tend to treat the child as a part of the collectivity. —R. Ware.

**638. DARLEY, FREDERIC L., & MOLL, KENNETH L. Reliability of language measures and size of language sample.** *J. Speech Hearing Res.*, 1960, 3, 166-173. Speech samples collected from 150 5-year-old kindergarten children were used to evaluate two language measures, mean length of response and structural complexity score, in relation to size of language sample. Each sample was divided into 10 5-response segments, and MLR and SCS were calculated for each segment. Reliability analysis suggests that MLR scores based on 50 responses are of adequate reliability; however the reliability of SCS values based on 50 responses may represent less precision than is desired. From the data presented the number of response segments necessary to achieve given levels of reliability can be estimated. —M. F. Palmer.

**639. DAVIDS, ANTHONY** (Brown Univer.), & **OLIVER, GERALDINE R.** **Fantasy aggression and learning in emotionally disturbed and normal children.** *J. proj. Tech.*, 1960, 24, 124-128. The relationship of two learning situations to the expression of aggression in fantasy was studied in two groups of 10-year old boys. A group of 30 normal boys and a group of 26 boys institutionalized for emotional disturbances were administered the children's form of the Rosenzweig Picture-Frustration Study. The extrapunitive and impunitiveness scores of this projective test were correlated with the results of a task involving learning a list of neutral and hostile words and a motor task carried out under conditions of frustration. No significant correlations were obtained in the group of normal boys. In the disturbed group significant negative correlations were obtained between extrapunitive and number of errors on the verbal learning task and between impunitiveness and number of errors in the motor learning situation. —L. Harrell.

**640. DOEHRING, DONALD G. Visual spatial memory in aphasic children.** *J. Speech Hearing Res.*, 1960, 3, 138-149. Accuracy of memory for location of visual stimulus as function of delayed recall, interference of fixation, and duration of exposure was investigated with 20 aphasic children, 20 normal children, and 20 deaf children. Accuracy of performance was unaffected by variations in duration exposure

in all groups, was decreased by same amount for each group by delay of recall and interference with fixation, and changed as a function of chronological age in some way for all three groups. Aphasic group was significantly less accurate than deaf and normal groups in terms of total error. Results suggest that children classified as aphasic are retarded in some, but not all, aspects of visual-perceptive ability. —M. F. Palmer.

641. ELLIS, NORMAN R. (State Colony & Training Sch., Pineville, La.), PRYER, MARGARET W., DISTEFANO, M. K., Jr., & PRYER, RONALD S. **Learning in mentally defective, normal, and superior subjects.** *Amer. J. ment. Def.*, 1960, 64, 725-734. Mentally retarded, normal, and superior Ss, mainly adolescents, were administered a memorization task and a finger maze. Learning score differences between groups were in the expected direction. Within group correlations between intelligence and learning scores were significantly different from zero for subnormal Ss only. —From Authors' Summary.

642. ERVIN, SUSAN M. (Univer. of California, Berkeley) **Training and a logical operation by children.** *Child Developm.*, 1960, 31, 555-563. A descriptive study was conducted on third and fourth grade children to test whether two tasks were logically identical, so that learning on one would transfer to the other. Only half of the children performed the transfer tasks with complete success, thus demonstrating that the tasks were different. It was found that success in transfer was related to spatial and to verbal ability. It was concluded that such evidence argues more persuasively for maturational aspects of the transfer task than does evidence of age changes in performance when training has not been provided. —Author's Abstract.

643. ERVIN, SUSAN M. (Univer. of California, Berkeley) **Transfer effects of learning a verbal generalization.** *Child Developm.*, 1960, 31, 537-554. Transfer and verbal mediation were studied in third and fourth graders, training with the ricochet of a ball and testing with reflection from a mirror. A control group was given irrelevant training, a verbal group was instructed about the equal angles of incidence and rebound, and a nonverbal group was given the same training without terminology to describe what they saw. Verbal performance in the form of explanations clearly improved when training had been verbal, though the teacher was different and transfer was spontaneous. Motor performance and predictions only showed improvement when older and more skilled children were eliminated to reduce outside sources of training. The nonverbal group was best, except on a key item which could be solved better by the taught rule than by alternative strategems. The evidence suggests that, while verbal training may influence nonverbal performance, it may not do so if there are alternative sources of training and if the link between verbal propositions and action is not clear. —Author's Abstract.

644. ESTES, BETSY WORTH, KODMAN, FRANK, & AKEN, MACY. **The validity of the Columbia Mental Maturity Scale.** *J. consult. Psychol.*, 1959, 23, 561. The validity of the CMMS is not upheld by the present study. The CMMS should not be used as a substitute for intelligence tests other than the Stanford-Binet, although it may have a limited use when other tests cannot be used. —E. E. Levitt.

645. EVERHART, RODNEY W. **Literature survey of growth and developmental factors in articulatory maturation.** *J. Speech Hearing Disorders*, 1960, 25, 59-69. Review of the literature accumulating during recent years regarding articulation and defective children. There seems to be a positive correlation between low intelligence and incidence of articulatory disorders. Reading and articulatory maturation appear to be associated. No significant difference between Negro and white boys having dyslalia in regard to other developmental items was found. Other differences, however, in development, were noted between Negro and white races. Articulatory difficulty may be caused by failure to establish unilateral dominance. Most investigators feel that speech generally does not develop until large muscular mechanisms have matured sufficiently. —M. F. Palmer.

646. EYSENCK, H. J. (Univer. of London) **Symposium: the development of moral values in children. VII. The contribution of learning theory.** Brit. J. educ. Psychol., 1960, 30, 11-21. Suggesting that moral values are learned and are to be explained by facts and principles of modern learning theory, the hypothesis tested is that conscience is a conditioned anxiety response formed by pairing conditioned stimuli (those producing socially less desirable behavior) with unconditioned stimuli (usually parental control techniques) immediately after the conditioned stimulus. Stimulus generalization is preserved to explain the association of conditioned stimulus and fear-anxiety responses. Experimental evidence in modern learning theory is referred to as supporting these hypotheses. Individual differences in conditionability due to innate biological factors and prior conditioning experiences are explained. Application of the theory to child rearing is suggested; character education cannot be a uniform process due to differences in individual personalities involved. —W. D. Smith.

647. GAIER, EUGENE L. (Univer. of Buffalo, N.Y.), & COLLIER, MARY JEFFERY. **The latency-stage story preferences of American and Finnish children.** Child Developm., 1960, 31, 431-451. The favorite stories of 120 American and 199 Finnish grade school children were examined to assess and compare sex differences of story preferences during the latency stage. There appeared to be no one generally popular story. There was, however, a generally preferred kind of story. Regardless of sex or cultural group, the subjects clearly preferred stories in the fiction category over fairy tales, information, biographical, animal, or religious stories. Particularly appealing were stories about travel and exciting, dangerous pursuit and escape; stories whose interest was heightened by particular characters, illustrations, or style; and stories about social situations involving subterfuge and surprise, or humor and comical enjoyment, in about that order. These similarities in reading interest both between sexes and cross-culturally bear out psychoanalytic assumptions that the latency-stage child turns his attention to all kinds of learning, including that about people, places, and social relationships. Qualitatively and statistically, the data lend very strong support to Peller's belief that latency-stage sex differences in reading interests have been underestimated. —Authors' Abstract.

648. GEWIRTZ, HAVA BONNÉ. (Univer. of Maryland, College Park) **Displacement of preference as a function of avoidance-avoidance conflict.** J. abnorm. soc. Psychol., 1959, 58, 395-398. An experiment on preference displacement was designed along the lines of Miller's avoidance-avoidance conflict model, and adapted to a puzzle-playing situation with children. 10 Ss were negatively reinforced on their attempts to solve the two puzzles representing the extremes of a five-puzzle series which constituted a shape similarity dimension. Ss' differential preferences for the five puzzles were obtained subsequently through paired comparison presentations. Using a group of 10 different Ss, it was shown that a single negative reinforcement trial applied at one extreme of the puzzle similarity dimension generated an avoidance gradient; and it was assumed that a similar gradient would be produced if an identical treatment were applied at the opposite extreme of the similarity dimension. On this basis, it was expected that the most likely resolution of the conflict between the two incompatible avoidance tendencies resulting from the double negative reinforcement applied in the displacement experiment would be at the point where the two gradients intersect; i.e., response peak was expected around the central stimulus of the similarity dimension. This expectation was supported by the results, in that a displacement preference curve was obtained; maximal preference was given to the intermediate puzzle, while the puzzles at the extremes of the dimension were the least preferred. It was also found that this treatment condition produced proportionately more individual displacement patterns than did other treatments not involving the conflict condition. —Author's Summary.

649. GLÖCKEL, HANS. (Univer. Erlangen, Germany) **Eine Vergleichsuntersuchung zur Frage jugendlichen Idealerlebens.** (A comparative study of the self-ideal in youth.) Psychol. Rdsch., 1960, 11, 1-20. The author investigates by way of

open questions the positive self-ideal (What person would you want to be like?) and the negative self-ideal (What person would you least like to be?) of 1251 German youths, age 10 to 21. Responses are classified into three categories: (1) persons with whom subject has direct contact, (2) famous people both real and fictitious, and (3) generalizations and abstractions which do not refer to a specific individual. Findings indicate that younger children, girls, and elementary school subjects select more persons in category one. Older children, boys, and secondary school subjects select their self-ideal more often from category two. In category two girls prefer movie stars, boys athletes, scientists, and politicians. Elementary school pupils select movie stars, secondary school pupils, scientists and politicians. Older subjects do not completely accept their positive or reject their negative self-ideal, but begin to introduce modifications. With increase in age of subjects there is a change from emphasis on concrete and obvious characteristics and traits of the self-ideal to psychological qualities and abstract values. This study is a repetition of an earlier study by Schmeing (1935) and results are discussed in relation to this earlier study, which generally speaking they support. —R. E. Muuss.

**650. GOODSTEIN, LEONARD D. MMPI differences between parents of children with cleft palates and parents of physically normal children.** *J. Speech Hearing Res.*, 1960, 3, 31-38. 170 mothers, 157 fathers of children with cleft palates were studied on MMPI in relationship to a previously-studied control group of parents of physically normal children. Experimental group was higher on L scale, and controls, on K. Comparison of individual profiles yielded significant results with experimental group mothers more frequently showing Mf and Pa as highest and control mothers having Pd as high. Experimental group fathers showed As and D more frequently, while control fathers showed Hy, Pd, and Mf more frequently. On Pd and Sc scales, controls were significantly higher on Anxiety scale. The differences, however, were small, and they do not appear to be real, even though mathematically significant. —M. F. Palmer.

**651. GOODSTEIN, LEONARD D. Personality test differences in parents of children with cleft palates.** *J. Speech Hearing Res.*, 1960, 3, 39-43. An attempt was made to relate the adjustment of parents with cleft palate children as judged from a personality test to clinical factors, including age of the child, type of cleft, rated social adjustment, and parents' adequacy. Ratings of parental adjustment based on the MMPI were of little help in understanding parents of children with cleft palates. —M. F. Palmer.

**652. GORDON, JESSE E. Relationships among mothers' n Achievement, independence training attitudes, and handicapped children's performance.** *J. consult. Psychol.*, 1959, 23, 207-212. Ss were 19 mothers and their deaf preschool children. Six TAT cards were administered to the mothers, following McClelland's standard instructions and their stories scored for n Achievement according to McClelland's criteria. Mothers were also administered part of Winterbottom's Independence Training Questionnaire, once with the set to respond with reference to their deaf children, and once with a set to respond with reference to their normal hearing children. Social maturity relative to intellectual ability was measured in the deaf children by the discrepancy between Merrill-Palmer and Vineland Social Maturity Scale scores. The results were as follows: (1) Attitudes favoring early independence in normal children were found in the mothers of deaf children who showed relatively large Merrill-Palmer discrepancies. (2) Independence training attitudes toward deaf children, and discrepancies between attitudes toward deaf children, and discrepancies between attitudes toward deaf and normal children were not associated with Merrill-Palmer-Vineland discrepancies. (3) Mothers with low achievement needs tended to be moderate in their independence training attitudes toward normal children, while high n Achievement mothers tended toward the extreme positions of favoring very early or very late independence. (4) High n Achievement mothers favored significantly later independence in deaf children than did low n Achievement mothers. —E. E. Levitt.

653. GREENE, MARGARET C. L. **Speech analysis of 263 cleft palate cases.** *J. Speech Hearing Disorders*, 1960, 25, 43-48. 263 cleft palate cases were assessed for nasopharyngeal competence, articulation, and nasality, following repair of the palate by V-Y retroposition and by secondary surgical procedures. Primary repair yields good results and a high percentage of non-nasal speakers. Lateral defects in articulation, however, are more common among these patients. Secondary surgical procedures are not very successful. —M. F. Palmer.
654. GRINGS, WILLIAM W., LOWELL, EDGAR L., & HONNARD, RONOLD R. **Electrodermal responses of deaf children.** *J. Speech Hearing Res.*, 1960, 3, 120-129. 15 severely-deaf preschool age children were administered controlled series of light, tone, and electrostatic stimuli on two different occasions in order to obtain normative data. Rate of spontaneous response was evaluated by controlled trials during rest periods and between periods of stimulation, and errors compared from one session to another. Data were collected, and percentage of subjects responding on a given trial as well as response magnitudes and latencies were compared and response magnitudes correlated to achieve estimates of reliability within sessions, moment-to-moment, and between session reliability, in an effort to establish normal factorial data for such children. —M. F. Palmer.
655. HAGERTY, ROBERT F., & HILL, MILTON J. **Pharyngeal wall and palatal movement in postoperative cleft palates and normal palates.** *J. Speech Hearing Res.*, 1960, 3, 59-66. Problem of pharyngeal movement in 50 subjects with normal palates and 50 postoperative cleft palate subjects was studied and compared by tracings from laminagrams, while the subjects were at rest phonating (a) and producing (s). There is more forward movement of the pharyngeal wall in postoperative cleft group. Upward movement was less than that of normals from rest to (a) and from rest to (s). Contact with posterior pharyngeal wall was seen in all 50 normals but in only 17 of the 50 postoperative subjects. Posterior movement of postoperative cleft palates was  $\frac{1}{2}$  that of normals for (a) and only  $\frac{1}{5}$  that of normals for (s). —M. F. Palmer.
656. HARTUP, WILLARD W. (Univer. of Iowa, Iowa City), & HIMENO, YAYOI. **Social isolation vs. interaction with adults in relation to aggression in preschool children.** *J. abnorm. soc. Psychol.*, 1959, 59, 17-22. In an attempt to clarify the effects of social isolation on the motivations of the child, the aggressive behavior of 48 children in a 10-minute modified doll play situation was studied in relation to other experimental conditions of isolation and interaction with adult experimenters, order of conditions, sex of child, and sex of experimenter. The major findings were: (a) the children showed a significantly greater frequency of aggressive behavior in doll play preceded by isolation than in doll play preceded by interaction experience; (b) boys were more aggressive than girls; (c) there were no differences in frequency of aggression from the first to the second session; (d) frequency of aggression was greater in each 2½-minute interval following isolation than in the corresponding interval following interaction. The most important implications of these results are (a) that frustration effects (as well as deprivation effects) occur in consequence of a child's being isolated in a nonpunitive fashion by an adult; (b) sex of child is a significant variable in experimental studies of children's aggression. —Authors' Summary.
657. HUNT, BETTY M. (Columbus State Sch., Ohio) **Differential responses of mentally deficient brain-injured familial children to meaningful auditory material.** *Amer. J. ment. Def.*, 1960, 64, 747-753. Mentally retarded children listened to recorded story book material and then were asked comprehension questions. Brain-injured children with severe auditory disabilities performed more poorly than brain-injured children with minimal auditory disabilities, and familial children. There were no differences between the latter two groups. Those with severe auditory disabilities also gave more nonsensical responses. —From Author's Summary.

**658. HUNT, J. McV.** (Univer. of Illinois, Urbana) **Experience and the development of motivation: Some reinterpretations.** *Child Developm.*, 1960, **31**, 489-504. In the past 10 years evidence has been uncovered which calls for a radical revision of several beliefs which have been basic to the theory of motivation that has been dominant for the past 40 years. (1) The studies of manipulative activity, exploratory activity, curiosity, and play have shown that organisms do not become quiescent when they are devoid of painful stimulation or homeostatic need or of stimuli which have been associated with them in the past (acquired drives). Rather, organisms become curious and playful. (2) While drive-reduction is reinforcing under conditions of high drive, it is not under conditions of low drive. Rather, it is drive-induction that is reinforcing under conditions of low drive. Moreover, various qualities of stimulation appear to have innate reinforcement value, either positive or negative. (3) While conditioned fear is a reality, conditioning, or the association of innocuous stimuli with painful stimuli or homeostatic needs, is not the only basis for fear. Strong fear can be evoked by stimuli which are merely incongruous with expectations derived from past experience. Moreover, painful and varied stimuli early in development may help to inoculate a child against such fears. This incongruity principle of motivation appears in either the theories or the empirical work of such varied investigators as Hebb, McClelland, Helson, Piaget, Festinger, Rogers, and G. A. Kelly. The inference is drawn that perhaps the proper management of motivation in children consists in less concern with trauma and more concern with facilitating basic information processing to maximize accurate anticipation of reality. —Author's Abstract.

**659. IRWIN, ORVIS C.** (Univer. of Wichita, Kansas) **Correct articulation of ten difficult consonants by children with cerebral palsy.** *Cerebral Palsy Rev.*, 1960, **21**(1), 6-7, 11. The speech of 333 cerebral palsied children, 3 to 16 years old, was analyzed for 10 difficult consonants (s, z, dz, as in Jack, etc.). No significant difference was found in the scores of boys and girls. Correlation with CA, MA, and IQ was very low. The children did best with initial consonants, with medial consonants next in rank. Right and left hemiplegics had the same mean scores. —I. Altman.

**660. IRWIN, ORVIS C.** **Infant speech: effect of systematic reading of stories.** *J. Speech Hearing Res.*, 1960, **3**, 187-190. 24 children between 13 months and 30 months of age were compared to a control group of 10 children of the same ages, during which time books were furnished weekly and a regimen of reading was prescribed for the children in the experimental group. Spontaneous vocalization of each of the 34 children was recorded by paper and pencil in the IPA in home visits during each 2-month period. Little difference was found between groups in mean scores for phoneme frequency until about the 17th month, and from then on the difference increased consistently with the experimental group having higher scores than the controls. —M. F. Palmer.

**661. ISCOE, IRA, & COCHRAN, IRENE.** **Some correlates of manifest anxiety in children.** *J. consult. Psychol.*, 1960, **24**, 97. The Children's Manifest Anxiety Scale was found to be significantly related to teacher ratings of over-all adjustment, and to the "Total Adjustment," "Personal Adjustment," and "Freedom from Nervous Symptoms" subscales of the California Test of Personality in elementary school children. —E. E. Levitt.

**662. ISCOE, IRA** (Univer. of Texas, Austin), **& HODGDEN, LAUREL.** **Use of the simulated group technique with children.** *Psychol. Rep.*, 1960, **6**, 175-179. This investigation was undertaken to test the feasibility of using simulated group technique in experimentation with children. A sample of 19 children ranging in age from 5 to 12 years gave estimates, in a simulated group arrangement, of the number of metronome clicks heard through earphones before and after hearing the tape recorded estimates of other children. Each subject was isolated in a testing cubicle and given 14 trials: 8 group influenced and 6 nongroup influenced. The results indicated that



the estimates of the individual was significantly influenced by the deviant judgments of the group ( $p = .01$ ). —R. Ware.

**663. JAKUBCZAK, LEONARD F., & WALTERS, RICHARD H.** (Univer. of Toronto) **Suggestibility as dependency behavior.** *J. abnorm. soc. Psychol.*, 1959, **59**, 102-107. Two groups, each consisting of 12 nine-year-old boys, were exposed to the autokinetic effect. The low-dependency groups consisted of boys who indicated unwillingness to accept help in tasks which they were unable to accomplish themselves; the high-dependency group consisted of boys who indicated willingness to accept help even when they required none. Each child was twice exposed to the autokinetic effect; on one occasion, judgments contrary to the child's were given by an adult; on the other occasion, contrary judgments were given by a peer. Half the Ss in each group received suggestions first from an adult, then from the peer; for the other half, the suggesters were employed in the reverse order. Predictions were made (a) on the assumption that suggestibility was a form of dependency behavior and (b) were partly based on Miller's (1948) theoretical model for the displacement of responses under conditions of strong and weak inhibition. These predictions were confirmed by the results for the pretraining trials of Ss' first experimental session. High-dependent Ss were significantly more suggestible than low-dependent Ss, and adults were more effective as confederates than were peers. In addition, the difference in suggestibility between high-dependent and low-dependent Ss was much greater when adults were used as confederates than when suggestions were given by peers. . . . The findings as a whole support the interpretation of suggestibility in terms of dependency behavior, especially if dependency is itself regarded as a class of learned responses which may be reinforced or extinguished by the responses of other persons. —From Authors' Summary.

**664. JOHNSON, EVA MAYNE.** (George Washington Univer.) **A study of psychological findings of one hundred children recovering from purulent meningitis.** *J. clin. Psychol.*, 1960, **16**, 55-58. Of a total of 110 patients who developed purulent meningitis, ranging in age from one month to twelve years, 10 expired within the first week of hospital admission. On the remaining 100 children who survived, the pre-illness mental status was determined and compared with after-recovery status. Four were not testable after illness because of severe physical and mental retardation. For the group as a whole, the study indicates no significant loss in mental or psychological status three months after illness. However, comparative age studies indicate that the younger age groups (less than two years) show the most significant differences and the most complications. Study of a limited number of cases suggests that subdural effusion probably has a detrimental effect upon mental status, especially in the very young. Causal organism, number of cells in cerebrospinal fluid, chemotherapy before hospitalization, and duration of illness prior to hospital admission were not found to show significant effects in producing differences in mental status, nor were there found to be significant sex or race differences at the end of three months after illness. —Author's Summary.

**665. JONES, W. R.** (Univer. Coll. of North Wales) **A critical study of bilingualism and non-verbal intelligence.** *Brit. J. educ. Psychol.*, 1960, **30**, 71-77. Suggesting that bilingualism need not be a source of intellectual disadvantage for school children and that socioeconomic status of linguistic groups requires consideration, recent research comparing school achievement of English monoglots and Welsh bilinguals is surveyed and reanalyzed. Reanalysis of the data of three recent studies suggests that monoglot and bilingual groups of corresponding social economic status do not differ significantly in nonverbal intelligence. The importance of including socioeconomic factors in any comparative study of monoglot and bilingual children is stressed. The limitations of a language questionnaire are pointed out. —W. D. Smith.

**666. JORDAN, THOMAS E., & deCHARMS, RICHARD.** (Washington Univer., St. Louis, Mo.) **The achievement motive in normal and mentally retarded children.**

Amer. J. ment. Def., 1959, **64**, 457-466. Three groups of students about 15 years old consisted of 47 mentally retarded in special classes, 42 mentally retarded in regular classes, and 60 normals. An abbreviated version of the Raven Progressive Matrices and the Reading Vocabulary and Reading Comprehension subscales of the California Achievement Tests were class administered. A four-card measure of *n* Ach was obtained orally in individual sessions. The normal Ss obtained significantly higher *n* Ach scores than the other two groups, a finding which is not apparently related to intelligence or word productivity. Retardates in special classes had less fear of failure imagery than retardates in regular classes. Neither intelligence nor grade placement were significantly related to *n* Ach scores. The authors speculate that the lower *n* Ach scores among retardates reflect differences in dependence-independence child training practices. —J. W. Fleming.

**667. KAGAN, JEROME. The stability of TAT fantasy and stimulus ambiguity.** J. consult. Psychol., 1959, **23**, 266-271. The long-term stability of eight fantasy categories on the TAT was assessed on a group of 86 children with TAT cards administered at ages 8-9, 11-6, 14-6. The eight contents were *n*-Dependence, *p*-Nurturance, *n*-Achievement, *n*-Physical Aggression, *n*-Indirect Aggression, *n*-Indirect Aggression to Parents, *p*-Physical Aggression, and *p*-Indirect Aggression. Of the eight contents, only physical aggression by the hero and achievement themes showed better than chance stability over the three administrations. —E. E. Levitt.

**668. KAGAN, JEROME, & MOSS, HOWARD A. (Fels Res. Inst., Yellow Springs, Ohio) Stability and validity of achievement fantasy.** J. abnorm. soc. Psychol., 1959, **58**, 357-364. The following data on 44 boys and 42 girls in the Fels research population were studied to assess the reliability and validity correlates of achievement fantasy: (a) three TAT protocols administered at ages 8-9, 11-6, and 14-6; (b) educational level of parents; (c) ratings of maternal concern with achievement for the first three years of the child's life; (d) changes in IQ score during the years 6 through 10. The results showed (a) an increase in occurrence of achievement themes with age and better than chance stability of occurrence over time, (b) a positive relation between early maternal concern with achievement and both achievement fantasy and IQ gain in girls, (c) a nonlinear but generally positive relation between occurrence of achievement fantasy and IQ gain for boys and girls, and (d) a suggestive relation between achievement fantasy and educational level of the same-sex parent. It was suggested that achievement fantasy is an index of the strength of the subject's behavioral tendency to seek achievement goals and that achievement concern on the part of the same-sex parent has a special influence on the child's achievement strivings. Specific methodological and theoretical problems with respect to measurement and interpretation of achievement fantasy were discussed. —Authors' Summary.

**669. KAGAN, JEROME, & MOSS, HOWARD A. (Fels Research Inst., Yellow Springs, Ohio) The stability of passive and dependent behavior from childhood through adulthood.** Child Developm., 1960, **31**, 577-591. This paper summarized the stability of passive and dependent behavior from childhood through adulthood for 54 subjects from the Fels Research Institute's longitudinal population. One psychologist studied reports based on observations of the child and rated each child for passive and dependent behavior for ages 3-6 and 6-10. A second psychologist, who had no knowledge of the childhood data, interviewed each S in adulthood and rated him on passive and dependent tendencies. Each adult S was also administered a tachistoscopic perception task to assess ease of recognition of dependent scenes. Passivity and dependency showed moderate stability for women, but not for men. The correlation between withdrawal from problems at ages 6-10 and adulthood was  $+.52$  ( $p < .01$ ) for women, and  $.21$  for men. The correlation between emotional dependence for ages 6-10 and adult dependency on parents was  $+.51$  ( $p < .01$ ) for women, and  $.02$  for men. It was suggested that dependent behavior was punished more consistently in boys than in girls. This punishment led to conflict over dependency in the growing male and decreased stability over time. The fact that the females



recognized the tachistoscopically presented dependency scenes earlier than the men was interpreted as support for this interpretation. —Authors' Abstract.

**670. KOCH, HELEN L.** *The relation of certain formal attributes of siblings to attitudes held toward each other and toward their parents.* Monogr. Soc. Res. Child Developm., 1960, **25**, No. 4. \$3.50. The study presents summaries of standardized interview data obtained from 360 five- and six-year-old children from two-child, urban families concerning certain of their attitudes toward their siblings, themselves, and their parents. The sibling variables which were the chief independent ones of the study were sex, age difference, and birth order, but sex of child was also a variable which received some attention. The relations between the sibling variables and the children's attitudes toward the various members of their family were devious and the patterns of relationships too complicated to be described here. —Author's Abstract.

**671. LARK-HOROVITZ, BETTY, & NORTON, JAMES.** (Purdue Univer., Lafayette, Ind.) *Children's art abilities: The interrelations and factorial structure of ten characteristics.* Child Developm., 1960, **31**, 453-462. From data collected in one of several experiments carried out between 1936 and 1940 at the Cleveland Museum of Art for the purpose of investigating some aspects of children's art ability, 10 characteristics out of a large number of observed and itemized qualities in color drawings were selected: Representation, Color Use, Grouping, Intentional Asymmetry, Indefinite Shapes, Resemblance to Style, Motion, Use of Medium, Area Treatment, and Line Treatment. Each of these was divided into two categories: "Indifferent" and "Remarkable." These 10 dichotomous variables were then correlated with one another over all Ss (highest number 1011). This correlation matrix was factored, and three factors were retained for rotation to an interpretable solution. Factor I' was chosen, deliberately, to represent Age (chronological). Of the two other factors, which may be interpreted as nondevelopmental components (i.e., independent of chronological age), one emerged as a Style factor, quite closely related also to Shape and Color Use; the other was identified as representation of Motion, strongly sustained by the characteristics of planned Asymmetry and Grouping. The remaining four characteristics contribute in varying degrees to both of these factors. —Authors' Summary.

**672. LEVINSON, BORIS M.** (Yeshiva Univer.) *The Binet Non-Verbal Preschool Scale.* J. clin. Psychol., 1960, **16**, 12-13. The Revised Stanford-Binet and selected items from forms I and II of the Binet Non-Verbal Scales were administered to 80 preschool children. These children had a mean CA, MA, and IQ of 5.09, 6.3, and 126.46 respectively. The correlations between CA, Binet MA and the performance scores were .54 and .62 respectively. It is recommended that whenever the Revised Stanford-Binet is administered, the additional test items from the two Binet performance scales be included, to secure an estimate of the preschool child's nonverbal intelligence. —Author's Summary.

**673. LEVINSON, BORIS M., & BLOCK, ZELICK.** (Yeshiva Univer.) *Research note on Columbia Mental Maturity Scale (CMMS) and Revised Stanford Binet (L) in a preschool population.* J. clin. Psychol., 1960, **16**, 158-159. This study evaluates the Revised CMMS in a preschool setting. 17 boys and 22 girls with a mean CA of 4.8 years were administered the Revised CMMS and Form L of the Stanford Binet. 11 subjects received the CMMS first followed by the Binet while 28 subjects received the Binet first and then the CMMS. The findings indicate correlations between CMMS and Binet MA and IQ of .45 and .39, respectively. Sex of subject did not influence the scores. It is recommended that examiners consider the following factors when evaluating CMMS results: practice effects, perseveration, rigidity in scoring, and order of difficulty. The authors thus point out that "further revision in item arrangement, administration, and scoring are indicated." —A. M. Kaplan.

**674. LEWIS, D. G.** (Queen's Univer., Belfast) *Differences in attainment between primary-schools in mixed-language areas: their dependence on intelligence and linguistic background.* Brit. J. educ. Psychol., 1960, **30**, 63-70. Differences in attainment in English and arithmetic of 375 10-year-olds in 16 primary schools in mixed-

language areas of Wales are studied with respect to differences in both intelligence and linguistic background. School attainments tended to increase with intelligence, though not regularly; and the school differences in intelligence did not account fully for the differences in attainment. Generally, the attainment of schools with pupils of a strongly Welsh background—i.e., bilingual pupils—was lower than that of other schools, this tendency being strong in English and slight in arithmetic. It is concluded that a bilingual environment may be regarded as an important factor with respect to primary-school differences of attainment in English which cannot be accounted for by intelligence. —Author's Summary.

**675. LIVERANT, SHEPARD. MMPI differences between parents of disturbed and nondisturbed children.** J. consult. Psychol., 1959, 23, 256-260. The MMPI was used to compare 49 sets of parents of clinically disturbed children (experimental group) with 49 fathers and 49 mothers of nondisturbed children (control group). The mean differences between the experimental and control groups on the 14 MMPI scales analyzed and a frequency count of the number of individuals in each group who had one or more pathologically elevated clinical scales supported the view that both fathers and mothers of disturbed children are themselves significantly more maladjusted than the fathers and mothers of nondisturbed children. However, a pattern analysis and a visual comparison with the typical norms for psychiatrically disturbed adults indicated that the experimental parents are more like "normal" parents than they are like adults who seek psychiatric help for themselves. An attempt to relate MMPI syndromes within the experimental group to various kinds of behavior problems exhibited by their children essentially met with failure. —E. E. Levitt.

**676. LOVELL, K., & OGILVIE, E. (Univer. of Leeds Inst. of Educ.) A study of the conservation of substance in the junior school child.** Brit. J. educ. Psychol., 1960, 30, 109-118. The development of children's concepts of conservation or invariance of substance as an essential in measurements in the physical world was studied in junior school children. Piaget stages involving the conservation of continuous and discontinuous quantities were investigated by testing individually the children in a junior school in a town in northern England with the Piaget-type items. The evidence supports Piaget's three stages in the development of the concept of invariance of substance; however, the stages are not clear cut and questions arise regarding the child's ability to argue logically in concrete situations. —W. D. Smith.

**677. LUCAS, CHARLES M., & HORROCKS, JOHN E. (Ohio State Univer., Columbus) An experimental approach to the analysis of adolescent needs.** Child Developm., 1960, 31, 479-487. A 90-item experimental test of 12 a priori need categories, judged to represent all specific psychological needs of adolescents cited in the literature, was administered to the in-school adolescents of a small midwestern city. The items were brief statements describing behaviors or qualities of hypothetical adolescents within each of 7 personal-social contexts: (1) like-sexed peer group, (2) heterosexual peer group, (3) like-sexed pair, (4) opposite-sexed pair, (5) the family, (6) the school, and (7) adults in general. Subjects were required to respond to each item, first, in terms of whether or not it coincided with perceived self, and second, whether or not it represented ideal self. Discrepancies between perceptions of self and perceptions of goals for self were considered to reflect need states. Responses to the test items were then factor analyzed to as to permit clusters of items highly correlated with each other to emerge together. The method of factor analysis also served to validate the items in terms of whether or not they tapped the need categories they were intended to tap. None of the a priori need categories emerged with all items intact, and some either did not emerge or were unrecognizable. Five tentatively identified orthogonal need factors were isolated: (1) Recognition-acceptance, (2) Heterosexual affection and attention, (3) Independence-dominance with regard to adults, (4) Conformity to adult expectations, and (5) Achievement in school. Administration of a pilot test of factors 1 through 5 in a second study resulted in Kuder-Richardson (Case III) reliabilities of .78, .91, .85, .82, and .84 respectively. —Authors' Abstract.

678. LUNZER, E. A. (Univer. of Manchester) **Aggressive and withdrawing children in the normal school.** *Brit. J. educ. Psychol.*, 1960, 30, 1-10. 42 "aggressive" and 40 "withdrawing" children, selected by teachers out of a total school population of 1,002 children, are compared with each other and with a group of "exceptionally well-adjusted children." Comparisons are based on rating scales, Bristol Guides to Social Adjustment, a sociometric test, and a test of social adaptation. The results indicate that there are probably rather more problems of aggression than withdrawal but that the severity of the two behaviour patterns is comparable. These indications are confirmed by a limited one-year follow-up. —Author's Summary.
679. LUNZER, E. A. (Univer. of Manchester) **Aggressive and withdrawing children in the normal school. II. Disparity in attainment.** *Brit. J. educ. Psychol.*, 1960, 30, 119-123. In a recent article, Lynn put forward the view that anxious children tend to show a higher performance in reading as compared with arithmetic. A group of 30 aggressive children (mean CA, 10-4) and a group of 26 withdrawing children (mean CA, 10-5) were given tests of reading and arithmetic and the disparity scores compared. There was a strong tendency for the former to perform badly in arithmetic and Raven's Matrices. These results are discussed in the light of available evidence. —From Author's Summary.
680. MCCARTHY, JAMES J. (Univer. of Illinois) **A test for the identification of defects in language usage among young cerebral palsied children.** *Cerebral Palsy Rev.*, 1960, 21(1), 3-5. A test for the identification of primary language defects in young cerebral palsied children is being developed at the Institute for Research on Exceptional Children, University of Illinois, and is scheduled to be released for experimental use in late 1960. Each of the nine subtests in the test battery is designed to assess a single language ability as derived by Osgood from his theory of human behavior. The resulting test profile should indicate a probable course of remediation. A study of remedial techniques is scheduled to follow the completion of test standardization. Although designed specifically for cerebral palsied children, the test should be suitable for all children with defects in language usage. —Author's Summary.
681. MANGE, CHARLES V. **Relationships between selected auditory perceptual factors and articulation ability.** *J. Speech Hearing Res.*, 1960, 3, 67-74. 35 children with functional misarticulation of (r) and a group of 35 matched normal-speaking children were studied on auditory testing including the Seashore Measurements of Pitch, Loudness, and Timbre, auditory flutter fusion rate, and word synthesis. There was a significant but low partial correlation between phonetic word synthesis ability and number of articulation errors. There were no significant relationships between the other auditory abilities and the number of errors. The control group achieved significantly higher scores than the experimental group in discrimination of pitch. —M. F. Palmer.
682. MEYER, WILLIAM J. (Univer. of Pittsburgh, Pa.) **Relationships between social need strivings and the development of heterosexual affiliations.** *J. abnorm. soc. Psychol.*, 1959, 59, 51-57. The purpose of this investigation was to examine the influence of two social psychological needs on the development of heterosexual affiliations. The Syracuse Scales of Social Relations were administered to 387 pupils from Grades 5 through 12. Analysis of the differences between same-sex and opposite-sex ratings indicated that the same-sex ratings were significantly higher for the succorance-need situation and, to a lesser degree, the playmirth situation. Contrasting developmental trends between the two need situations and between the sexes were reported. The girls' ratings of the boys on the playmirth situation changed to a positive direction after Grade 7. This shift was not evident for the boys nor was it evident for either sex on the succorance-need situation. The data were interpreted as supporting the notion that early sex-typed behavior is maintained throughout the school years by means of a system of social reinforcements. —Author's Summary.
683. MEYER, WILLIAM J. (Univer. of Pittsburgh, Pa.), & SEIDMAN, STANLEY B. **Age differences in the effectiveness of different reinforcement combinations.**

Child Developm., 1960, 31, 419-429. The effectiveness of four combinations of reinforcers at two developmental levels were analyzed in this experiment. The combinations used were Right-Wrong, Right-Nothing, Nothing-Wrong, and Buzzer-Nothing. It was assumed that the nothing aspects of these reinforcers would be sufficiently ambiguous to permit age differences in sensitivity to reinforcing cues to function. The Ss, age 4 to 5 and 8 to 9, were required to discriminate the larger of two blocks presented in pairs. A significant age  $\times$  treatments interaction for the acquisition series was interpreted as meaning that the effectiveness of these reinforcers is related to level of development. The Nothing-Wrong group performed significantly better on the extinction series than the other groups. This latter finding was interpreted as meaning that nothing when paired with wrong acquires positive reinforcement value. —Authors' Abstract.

684. MITCHELL, ANNA CARR. A new maximum CA for the Draw-a-Man Test. J. consult. Psychol., 1959, 23, 555-557. This study attempts to determine an appropriate maximum CA divisor for the Draw-a-Man Test. The sample of 536 mentally retarded children were found to show growth in Draw-a-Man mental age through at least the sixteenth year. When IQ was computed using the recommended maximum CA divisor of 13.0, the growth in MA after age 13.0 resulted in significant, spurious increases in IQ. The results indicate that a maximum CA divisor of 13.0 is inappropriate in calculating Draw-a-Man IQ: the significant MA increment after age 13.0 should be counterbalanced by a corresponding CA increment. An appropriate pattern for CA increase through the years from 13 to 16 was found to be that used by Terman and Merrill in constructing the Stanford-Binet IQ tables. —E. E. Levitt.

685. MORGAN, E. (Dundee, Mich.), SUTTON-SMITH, B., & ROSENBERG, B. G. Age changes in the relation between anxiety and achievement. Child Developm., 1960, 31, 515-519. When the CMAS was administered to fifth and sixth grade children, it was found that there were significant differences on anxiety scores between the grades, but not significant differences between the sexes. This reverses an earlier finding of Castaneda, McCandless, and Palermo. Perhaps more important was the discovery that, when the children at different grade levels are clearly differentiated in terms of achievement, the high achieving girls of the fifth grade are significantly more anxious than the low achieving girls of the fifth grade, but in the sixth grade this relation is reversed with the low achieving sixth grade girls being significantly more anxious. The same reversal in anxiety scores was not found for the boys for whom measures of anxiety did not differentiate between the high and low achieving groups. These results indicate the inadvisability of using CMAS measures or those of other personality inventories which are not adequately differentiated in terms of grade, sex, and achievement. It is suggested that these reversals in the girls' scores may be attributed to physical changes which occur in the years immediately prior to menarche. —Authors' Abstract.

686. MUUSS, ROLF E. (Goucher Coll., Baltimore, Md.) A comparison of "high causally" and "low causally" oriented sixth grade children in respect to a perceptual "intolerance of ambiguity test." Child Developm., 1960, 31, 521-536. The study was designed to determine whether children who are high causally oriented to their physical and social environment differ from children who are low causally oriented in their responses to a perceptual intolerance of ambiguity test, the Decision Location Test (DLT). The DLT consisted of four subtests, each of which contained a succession of 15 slides of the same object becoming progressively more complete. The hypothesis is that high causally oriented children will be more tolerant toward ambiguous stimuli than low causally oriented children. They will (a) make fewer guesses to an incomplete picture (b) wait until the picture is more complete before giving a response (c) make the correct response earlier (d) be more inclined to express a feeling of uncertainty as long as the stimuli are ambiguous. The data support the sub-hypotheses (a) and (b) at the 5% level and (d) at the 1% level. There is no significant difference between the slide at which correct perception occurs (c). Impli-

cation for mental health and a theory of causal orientation are discussed. —Author's Summary.

**687. O'NEILL, JOHN J. Sudden unilateral hearing loss attributable to mumps.** *J. Speech Hearing Disorders*, 1960, **25**, 55-58. A battery of audiometric tests was administered to six cases exhibiting clinical mumps without parotitis. In those patients giving definite indication of mumps, bone conduction thresholds were characteristically lower than air conduction. Speech reception thresholds were higher than the average pure-tone loss. Discrimination scores were very low, and there were indications of recruitment. —M. F. Palmer.

**688. PETERSON, DONALD R., CATTELL, RAYMOND B., & QUAY, HERBERT C. Personality factors in nursery school children as derived from teacher ratings.** *J. consult. Psychol.*, 1959, **23**, 562. Most of the factors Cattell found in adults were also found in preschool children by means of a factor analysis of teacher ratings. Over the age range studied, "factor composition sometimes appeared to change in a systematic way." —E. E. Levitt.

**689. PETERSON, L. R., & SMITH, L. L. (Cedar Rapids Comm. Sch. Dist., Iowa) The post-school adjustment of educable mentally retarded adults with that of adults of normal intelligence.** *Except. Child.*, 1960, **26**, 404-408. This is a follow-up study of 45 persons who in secondary school were educable mentally retarded. A comparison group of former pupils of normal intelligence had also been of low economic status. The median age of both groups at follow-up was 24. Education, work, home, family, social, and civic characteristics and differences are summarized. —J. W. Fleming.

**690. PHILLIPS, E. LAKIN. (Natl Orthopedic & Rehabilitation Hosp., Arlington, Va.) Toward an "automatic" child psychologist.** *Psychol. Rep.*, 1960, **6**, 384. This paper presents a short overview of the basic ideas of an automatic approach to the solution of a number of common and critical behavioral problems in child rearing. "Automatic" refers to uniform sets of rules for the regulation and control of behavior. The author envisages a theory of behavior control which assigns symptoms to the general class of behavior disorder, not to an underlying psychodynamic state. Diagnosis consists of breaking down a given problem into a series of questions each of which is answerable on a yes or no basis. No search for etiology is undertaken. Therapy is based on progressive clarification of the relationships between behavior and its consequences and overcoming the behavior problem by controlling the "effects" and not on probing, permissive, or extinction techniques. Follow-up study evidence indicates a considerable improvement rate (90%) by the use of this method of control. —R. Ware.

**691. PILLINGER, A. E. G. (Univer. of Edinburgh), SUTHERLAND, J., & TAYLOR, E. G. Zero error in Moray House verbal reasoning tests.** *Brit. J. educ. Psychol.*, 1960, **30**, 53-62. Non-equivalence in the performance of the samples of children used in standardising the several members of a series of similar tests results in lack of comparability between the standardised scores obtained with different tests in the series; all the standardised scores from one test may be positively or negatively biased relative to those from another. The bias is named "zero error." The zero errors of 20 Moray House verbal reasoning tests, all relative to one taken as standard, are estimated and shown to be larger for more recent than for earlier tests. The increase is ascribed mainly to increased test sophistication in the later standardisation samples. Local education authorities should take zero errors into account in their allocation procedures. —Authors' Summary.

**692. PODELL, JEROME E., & PHILLIPS, LESLIE. (Worcester State Hosp.) A developmental analysis of cognition as observed in dimensions of Rorschach and objective test performance.** *J. Pers.*, 1959, **27**, 439-463. This article continues a series of investigations designed to analyze both normal and pathological behavioral patterns in terms of developmental level. The purpose of this study was to cross-

validate previous findings on the dimensions of cognitive functioning through a re-analysis of data from earlier studies and collection of new data. Two samples of normal adult males ( $N = 32$  and  $37$ ) were administered Rorschachs and a battery of "objective tests" involving motor, perceptual, and conceptual functions. Cluster analysis of Rorschach Developmental Indices yielded 3 dimensions (Varied Productivity, Globality, and Accuracy and Integration). Cross-validation indicated consistency of results was greatest for the first, and least for the third factor. Globality was independent of the other two dimensions. Cluster analysis of the objective tests yielded an independent set of four dimensions for each sample. These dimensions were arranged into seven "developmental levels" that paralleled the Rorschach developmental scale. The two methods for determining developmental level were in good agreement at the lower end, but less consistent at the upper end of the scale. The authors conclude that "enough consistency was found in the developmental ordering of Rorschach and objective test dimensions to warrant further research along these lines." —C. D. Smock.

**693. POLLACK, MAX, & GORDON, EDMUND.** (Hillside Hosp., Glen Oaks, L.I., N.Y.) **The face-hand test in retarded and nonretarded emotionally disturbed children.** *Amer. J. ment. Def.*, 1960, **64**, 758-760. 124 children, CA 6 to 15 attending an out-patient psychiatric clinic were examined with the face-hand test (simultaneous tactile stimulation of cheek and hand). 74% were of subnormal intelligence. Performance on the face-hand test was unrelated to psychiatric diagnosis or severity of behavior disorder. When equated for MA, children with MA 7 years or above were able to identify both face and hand stimuli within ten trials. It is concluded that the test is as valid an indicator of intellectual development of emotionally disturbed children as of normal children. —From Authors' Summary.

**694. QUAY, HERBERT.** (Vanderbilt Univer., Nashville, Tenn.) **The effect of verbal reinforcement on the recall of early memories.** *J. abnorm. soc. Psychol.*, 1959, **59**, 254-257. 34 college students were asked to recall events from their early childhood. After a baseline was established in an initial operant period, 16 of the Ss were reinforced by E saying "uh-huh" for memories concerned with members of the S's family. 18 of the Ss were similarly reinforced for memories not concerned with the family. In both groups the reinforcing stimulus served to increase the proportion of memories in the reinforced category when the reinforcement period was compared to the operant period. The results, indicating that personally relevant and emotionally changed materials are subject to manipulation by the use of a minimal reinforcing verbalization, were related to the testing of causal and dynamic hypotheses about personality within the psychotherapeutic interview. —Author's Summary.

**695. REESE, HAYNE W.** (Univer. of Buffalo, N.Y.) **Motor paired-associate learning and stimulus pretraining.** *Child Developm.*, 1960, **31**, 505-513. It was predicted that better performance on a motor paired-associate task results from (a) higher levels of verbal pretraining, and (b) greater degrees of distinctiveness of the verbal responses learned during pretraining. The Ss were fourth, fifth, and sixth grade school children. One group learned similar nonsense-syllable names for four stimuli in task I, and a second group learned distinctive nonsense-syllable names for the stimuli. Two of the associations were learned to a high level, and the other two to a lower level. In task II, Ss learned to associate button-pushing responses with six stimuli, including the four pretraining stimuli and two nonpretraining stimuli. The latter served as a performance-set control. It was found that the effect of level of pretraining depended on the similarity of the task I responses. For distinctive syllables, each level of pretraining produced better performance on task II than the control condition, but increasing levels did not produce increasing amounts of facilitation. For syllables of intermediate similarity (as determined by task I analyses), only the high level of pretraining produced better performance than the control condition. For syllables of extreme similarity, neither level of pretraining produced facilitation. —Author's Abstract.



696. REISMAN, JOHN M. (Rochester Child Guidance Clinic) **Types of movement in children's Rorschachs.** J. proj. Tech., 1960, 24, 46-48. The purpose of this study was to test the hypothesis that the m responses in a child's Rorschach record will not be of the same type (extensor, flexor or blocked) as the M or FM responses. The Rorschach records of 24 children, CA 6 to 15, referred to a child guidance clinic were analyzed by three judges. Results did not support the hypothesis, but rather support the opposite view. The conclusion is "that Piotrowski's interpretation of m is not applicable to the analysis of the Rorschachs of disturbed children." —L. Harrell.
697. RHEINGOLD, HARRIET L. (Nat'l Inst. Mental Hlth, Bethesda, Md.) **The measurement of maternal care.** Child Developm., 1960, 31, 565-575. The purpose of this paper was to describe a method of measuring maternal care in terms of the actual operations a mother performs in caring for an infant. The method employed the technique of time-sampling, with both the items of behavior to be recorded and the time schedule of observations specified in advance. The method was illustrated by comparing care given three-month-old infants in their own homes with care given in an institution. On a checklist containing 30 items of mothering activities and 12 items of infant behavior, the observer recorded what both mother (or caretaker) and infant were doing on any second of observation. Observations were made every 15th second for the first 10 minutes of every consecutive quarter hour for a period of eight hours. A record for an infant therefore consisted of 1280 observations systematically distributed over eight hours. The results showed that the home infants received care 4.5 times as often as infants in an institution; the differences in some specific caretaking operations were even greater. The differences, however, tended to be differences in amounts of caretaking and not in kinds (as defined here). Measures of infant activities, on the other hand, yielded only small and, in general, not reliable differences. The results demonstrate that a set of maternal care variables can be defined and measured. As a consequence, it may now be possible to formulate and test quantitative statements about the relationships between maternal care and infant behavior. —Author's Summary.
698. ROSENSTEIN, JOSEPH. **Cognitive abilities of deaf children.** J. Speech Hearing Res., 1960, 3, 108-119. The cognitive ability of 60 deaf and 60 hearing children was examined with test battery of: a perceptual discrimination task, a modified Wisconsin Card Sorting Task, and a concept attainment and usage task, all presented visually and nonverbally. There was no significant difference between deaf and hearing children in their ability to perceive, abstract, or generalize. The hypothesis that no differences will be observed between deaf and hearing children where the language involved in these tasks is within the capacity of deaf children is supported. —M. F. Palmer.
699. SCHAEFER, EARL S. (Nat'l Inst. Mental Hlth, Bethesda, Md.) **A circumplex model for maternal behavior.** J. abnorm. soc. Psychol., 1959, 59, 226-235. By organizing several empirical studies of maternal behavior using Guttman's (1954) circumplex model, it was demonstrated that many of the existing concepts of maternal behavior can be ordered within a two-dimensional space. Concepts that do not describe molar social and emotional interactions of mother and child often do not show a clear circumplex ordering. The following interpretations of the findings were made: (1) Two major dimensions of maternal behavior can be isolated in all studies; these can be labeled Love vs. Hostility and Autonomy vs. Control. (2) A circumplex organization of this universe shows a clearer nomological network than an organization in terms of discrete dimensions. (3) A theoretical generalization of the circumplex of maternal behavior is presented. It provides an ordered, parsimonious nomological network or model for much of the variance of a mother's social and emotional behavior toward an individual child. —Author's Summary.
700. SHERMAN, DOROTHY, & CULLINAN, WALTER L. **Several procedures for scaling articulation.** J. Speech Hearing Res., 1960, 3, 191-198. Measurements

of articulation defectiveness were obtained for 50 1-min. tape recorded samples of children's speech, using a 9-point, equal-appearing interval scale. 14 observers rated consecutive 10-sec. segments of each sample, and a mean scale value was computed for each sample for each observer. An additional 15 observers rated each sample once as a whole. Individual observer responses were satisfactorily reliable. Results of the two procedures are similar and agree with previous experiments in which scale values for same 50 samples were obtained from observer responses to randomized 10-sec. segments. Each of 6 sets of median-scale values for 10-sec. segments is highly correlated with a set of means of responses to each sample as a whole. —M. F. Palmer.

**701. STAKE, R. E., & MEHRENS, W. A.** (Univer. of Nebraska, Lincoln) **Reading retardation and group intelligence test performance.** *Except. Child.*, 1960, **26**, 497-501. 31 retarded, 11 normal, and 31 accelerated readers were administered the California Test of Mental Maturity and the WISC. A mental age derived from the WISC was subtracted from the MA score predicted by the CTMM. Only differences for the accelerated group were significant. —From Authors' Summary.

**702. STEVENSON, HAROLD W., & SNYDER, LEILA C.** (Univer. of Minnesota, Minneapolis) **Performance as a function of the interaction of incentive conditions.** *J. Pers.*, 1960, **28**, 1-11. The major purpose of this study was to determine the interactive effects on performance of three kinds of incentive conditions: reward (supportive verbal comments); punishment (critical comments concerning Ss' performance); neutral (no "social reinforcement"). The sample consisted of 90 mentally retarded children (46 girls, 44 boys) whose mean CA was 13.5 years ( $SD = 2.4$ ) and mean MA was 6.5 years ( $SD = 1.7$  years). Children with gross motor, sensory, emotional disturbances were excluded; all were of the familial type of mental deficiency. The task consisted of inserting marbles of different colors in two holes in a "game" board. After 7 minutes, Ss in each of the groups were subdivided into three equal subgroups which were tested for 7 minutes under a different incentive condition. The results indicated that performance level was highest under neutral, somewhat lower under reward, and poorest under the punishment conditions during the first phase. During phase two, reward elicited the highest level of performance, with the neutral, then punishment conditions associated with lower performance. Differences in performance between the first and second half of the experimental session were a function of the incentive conditions operating in both the first and second phase. Ss with higher MAs were relatively more susceptible to the effects of incentive conditions than those with lower MA. —C. D. Smock.

**703. STOICHEFF, MARGARET L.** **Motivating instructions and language performance of dysphasic subjects.** *J. Speech Hearing Res.*, 1960, **3**, 75-85. Speech behavior of 42 dysphasic subjects following three types of motivating instruction—encouraging, discouraging, nonevaluative—was investigated in terms of number of errors on naming and reading tests and self-ratings of performance. Dysphasic patients subjected to discouraging instructions do significantly more poorly on language tasks than do those under encouraging instructions. Dysphasic patients under discouraging instructions rate their performance more poorly than do those under encouraging instructions. There is a psychological component in symptomatology presented by the dysphasic individual, and the author postulates the concept of anxiety as an explanation. —M. F. Palmer.

**704. TOLOR, ALEXANDER** (Fairfield State Hosp., Newton, Conn.), GLASS, HARVEY L., & MERMELSTEIN, MATTHEW D. **Rorschach card rejection as a correlate of intelligence in children.** *J. proj. Tech.*, 1960, **24**, 71-74. Tamkin's finding that neuropsychiatric patients scoring low on the Wechsler-Bellevue Intelligence Scale rejected one or more cards on the Rorschach was tested using a group of 268 emotionally disturbed children, CA 4 to 18 years. The results show that there is no significant difference in the intelligence of those rejecting one or more cards and those rejecting no cards. Frequencies with which the individual Rorschach cards are rejected are also presented. —L. Harrell.



705. TRAPP, E. PHILIP, & EVANS, JANET. **Functional articulatory defect and performance on a nonverbal task.** *J. Speech Hearing Disorders*, 1960, 25, 176-180. The Wechsler digit symbol subtest which is sensitive to anxiety levels was used on 18 articulatory defects of a mild nature compared with 18 severe cases and a control group of children with normal speech. Children with mild functional articulatory defects performed significantly better on a set of five trials on the Wechsler digit symbol subtest than children with severe functional articulatory disorders. —M. F. Palmer.
706. VENESS, THELMA. (Birkbeck Coll., London) **Goal setting behavior, anxiety and school streaming.** *Brit. J. educ. Psychol.*, 1960, 30, 22-29. Inquiring into the aims and aspirations of youth expecting to leave school in 12 to 18 months, a level of aspiration test by which a subject could set his goal repeatedly as he made repeated trials was employed with 778 students distributed among various school streams. Grammar, Technical, Modern A, and Modern B, etc. A brief paper entitled "The Best Moment of My Life" was written by each subject as well as an essay telling the story of their lives. Questionnaires and interviews also constituted part of the data gathering procedure. A matched control group of nonschool learners was used in the study. Conclusions suggest that the anxious child is somewhat constrained in approaching life; however, no significant relationships to school streaming were found. —W. D. Smith.
707. WALLACH, MICHAEL A., & CARON, ALBERT J. (Harvard Univer.) **Attribute criticality and sex-linked conservatism as determinants of psychological similarity.** *J. abnorm. soc. Psychol.*, 1959, 59, 43-50. Two hypotheses were proposed: (1) Attribute Criticality: One event is more likely to be judged similar to a standard event if the two differ on some property which, although always present in the standard, has not been learned as criterial for defining it, than if this property has been learned as criterial for its definition. (2) Categorizing Style: When presented with events of varying criterial difference from a standard, females should judge fewer of these events as similar to the standard than males, on the ground that the former tend to categorize more narrowly (i.e., conservatively) than the latter. Attribute criticality was varied by changing the nature of the negative instances with which positive exemplars of a class were contrasted, and categorizing style was assessed from the sex of the child and also by an independent measure of category width in an experiment involving a concept attainment task and similarity judgments with nonsense figures. 78 sixth-grade school children served as Ss, and both hypotheses were sustained. It was concluded that recognition of similarity depends on learned classification rules and on individual differences in conceptual conservatism. The latter in turn seemed due to a sex difference in fear of independent expression. —Authors' Summary.
708. WEAVER, CARL H., FURBEE, CATHERINE, & EVERHART, RODNEY W. **Articulatory competency and reading readiness.** *J. Speech Hearing Res.*, 1960, 3, 174-180. Speech articulation test and Gates Reading Readiness Test were administered to 638 children in grade 1 during first 4 weeks of school. Reading readiness and acquisition of adequate speech are to some extent related, although proportion of variance common to reading readiness measures and articulation measures is quite small. It is possible the Gates Test measures part of an underlying variable causal to acquisition of both reading and speech. Strength of relationship in grade 1 seems to be about the same for each of the Gates subtests and for 2 age groups, 1 younger than 6 years and 3 months and 1 older. —M. F. Palmer.
709. WIENER, GERALD, CRAWFORD, EDWARD E., & SNYDER, ROBERT T. (Rosewood State Training Sch., Owings Mill, Md.) **Some correlates of overt anxiety in mildly retarded patients.** *Amer. J. ment. Def.*, 1960, 64, 735-739. 52 adolescent, male, familial retardates were separated into three achievement levels according to Wide Range Achievement Test Scores. Each S was verbally administered general and test anxiety scales and the Bender-Gestalt. When age, IQ, and Lie score were controlled, poor achievement was significantly related to a high test anxiety

level but not to a high general anxiety. Bender-Gestalt errors were significantly related to underachievement, and to higher anxiety as indicated by both scales. —From Authors' Summary.

**710. WILSON, LILLIAN F., DOEHRING, DONALD G., & HIRSH, IRA J. Auditory discrimination learning by aphasic and nonaphasic children.** *J. Speech Hearing Res.*, 1960, 3, 130-137. 14 sensory aphasic children were compared with 14 nonaphasic children on tasks of associating 4 auditory stimuli with 4 visually-presented alphabet letters. Auditory stimuli consisted of long tone, short tone, long noise, short noise. Over half the aphasic children learned task in about same number of trials as nonaphasics; the others failed completely. The difference was unrelated to age, IQ, or amount of hearing loss. They seemed able to make required discriminations. Possibly poor performance was result of special difficulty in learning to associate visual stimuli with 4 auditory stimuli. —M. F. Palmer.

**711. WILSON, RONALD S. (Yale Univer., New Haven, Conn.) Personality patterns, source attractiveness, and conformity.** *J. Pers.*, 1960, 28, 186-200. Two processes are discussed that are activated by instances of interpersonal disagreement. The social accommodation process is characterized by a drive to maintain positive relationships with people who are liked, and to this end S will comport himself in such a way as to minimize deviations between himself and the liked person. In contrast, the self-correction process focuses on the information potential of disagreement, with the aim of establishing a more accurate appraisal of the environment. Two groups were chosen by a pencil-and paper measure as representing the extremes of each process. The groups were run in a conformity situation where pressure was applied to two sets of judgments, a click-counting task and a series of attitude statements. As predicted, the SC group yielded equally to liked and disliked sources in both sets of judgments. And as predicted, the SA group yielded significantly more to liked sources than disliked sources in the attitude judgments. However, contrary to prediction, greater yielding by the SA group to liked sources did not materialize in the click series. Also, the SC group was expected to resist pressure more effectively in the click series, a prediction that was not confirmed. On the basis of associated measurements, the relationship between intelligence and conformity is regarded as an indirect one, interacting with personality variables and the area of judgment being pressured. Sociometric status is related to conformity in curvilinear fashion, with maximum conformity being associated with indefinite status and decreasing towards both the popular and rejected extremes of the sociometric scale. —Author's Summary.

**712. WOOD, NANCY E. Language development and language disorders: a compendium of lectures.** *Monogr. Soc. Res. Child Developm.*, 1960, 25, No. 3. (Serial No. 77) \$2.75. A compilation of nine selected lectures originally presented at a symposium sponsored by The Cleveland Hearing and Speech Center as part of a new curriculum in Language Pathology at Western Reserve University. Includes a thorough explanation of the processes involved in the development of language and speech by Dorothea McCarthy and a discussion of language disorders, particularly aphasia in children, by Nancy E. Wood. The fields of pediatrics, neurology, and psychiatry are competently represented by Robert D. Mercer, discussing organic brain syndromes and speech disorders; Lowell G. Lubic, describing the neurologic evaluation of the nonverbal child; and Earl D. Loomis, contrasting and comparing autistic and symbiotic syndromes. Some current procedures used in psychological assessments of nonverbal children are challenged by Melvin A. Allerhand; Margaret C. Lefevre introduces some provocative statements concerning language problems of children with cerebral palsy; and a stimulating discussion of language development of mentally retarded children is presented by T. Ernest Newland. New thoughts concerning adult aphasia are crystallized by Jon Eisenon in his discussion of when and what is aphasia. This compendium does not purport to answer all questions related to language development or the various problems that can impede communication. Rather, these lectures attempt to integrate basic information, stimulate thought, and postulate questions concerning this area of study. —Author's Abstract.

713. ZUK, G. H. (St. Christopher's Hosp. for Children, Philadelphia, Pa.) **Size: its significance in the copied drawings of children.** *J. clin. Psychol.*, 1960, 16, 38-41. Groups of children and adults were compared with respect to size variables of three geometric designs, items on the Stanford-Binet, L, copied from a model on the test booklet. Results showed that size was a function, at least in part, of mental age; that more mentally mature children and adults, regardless of design, more closely approximated the size dimensions of the model. Less mentally mature children drew the designs consistently smaller than the other groups. The results are discussed in the context of Piaget's view that earlier sensorimotor patterns recur in new learning throughout childhood. In this light, "regressive features" in children's drawings may be considered as evidence of new learning taking place as well as evidence for deterioration of old learning. The explanation for the direction of changes in size with age is still unclear. Nature of the task, "set" and figure-ground phenomena—these are probably significantly intercorrelated—seem to be influential variables. —Author's Summary.

#### PSYCHIATRY AND MENTAL HYGIENE

714. AINSWORTH, MARY D. **The significance of the five year research programme of the Institute of Child Study.** *Bull. Inst. Child Study*, 1960, 22, 3-16. An evaluation of five years of research of the Institute of Child Study (Toronto) and a description of the training and research facilities of the Institute. Emphasis is placed upon evaluating four aspects of the security theory of Blatz: (1) Though there is dependency of the child upon parents, the feeling of dependency develops in interaction (dependent security). (2) Mature dependent security is essential to mature independent security. (3) Independent security is essential to emotional health and depends upon the enjoyment of the process of goal directed behavior and not just final attainment of a goal. (4) The importance of the fact that "security theory places an equal emphasis upon the so-called ego functions of learning, competence, skills, anticipation of consequences, and decision making, which constitute the basis of independent security, and upon interpersonal relations as implicit in dependent security." —L. E. Dameron.

715. BARRY, HERBERT, Jr. (Harvard Med. Sch., Boston, Mass.), & LINDEMANN, ERICH. **Critical ages for maternal bereavement in psychoneuroses.** *Psychosom. Med.*, 1960, 22, 166-181. Maternal bereavement occurred more frequently in a series of 947 psychoneurotic patients than in the total population. The difference is statistically significant. Deaths of fathers followed a strikingly dissimilar pattern. The impact of maternal death was most pronounced in early childhood and in female patients. In the latter the critical age was under 9 years. Little girls were particularly vulnerable to the death of their mothers before the age of 3. In males, the relationship between maternal death and subsequent neurosis was, in the present series, at most suggestive. Data on causes of separation other than death, though less precise, are consistent with the findings on bereavement. Previous studies indicate that maternal death is important for both males and females in delinquency and psychosis. Future reports should specify which parent died and the age of the child when bereaved. The term "broken home," unless qualified to indicate whether by death, divorce, imprisonment, etc., is obsolete in psychiatric statistical studies and should be abandoned. —Authors' Summary.

716. BLAU, THEODORE H., & SCHAFFER, ROBERT E. **The Spiral Aftereffect Test (SAET) as a predictor of normal and abnormal electroencephalographic records in children.** *J. consult. Psychol.*, 1960, 24, 35-42. The Archimedes Spiral aftereffect was demonstrated to be more effective in diagnosing brain injury in children, using the EEG as a criterion, than were the Bender, DAP (scored only for deviation

of the figure from the vertical), and five WISC subtests. Correlations with the EEG criterion ranged from .08 for Digits Reversed to .74 for the Spiral aftereffect. The SAE correctly predicted 100% of the abnormal EEG records and 86% of the normal records. A tabular review of 16 other investigations of the SAE is included. —E. E. Levitt.

**717. BLUEMEL, C. S. Concepts of stammering: a century in review.** *J. Speech Hearing Disorders*, 1960, **25**, 24-32. Review of many clinical efforts during past century to improve stuttering. Stuttering should be used to identify an oral speech disturbance and stammering a broader concept of thinking behind stuttering. A stammerer appears to be a poorly integrated person, inwardly excitable, easily flustered and confused; functioning of his internal organs is easily disturbed by stress. A stammerer could continue throughout life without a speech breakdown, but, if a child or an adult encounters acute or sustained stress, speech becomes disorganized. Therapy should attempt to reorganize speech rather than remove multimorph symptoms of the disturbance. Pupil must have rich opportunity of hearing and feeling himself talking normally. Throughout, the stammerer should lay emphasis on clear, verbal thinking so fluent speech emerges. Early therapy is the most effective. —M. F. Palmer.

**718. BOSTON, JOHN A., Jr.** (Austin Community Guidance Center, Texas) *The defective child, his family, and the use of a child guidance clinic.* *Amer. J. publ. Hlth*, 1960, **50**, 799-802. The objectives and functioning of a child guidance clinic are described. Five cases are presented involving parental difficulty in understanding and accepting their situation. The author shows how "Child guidance clinics, through the collaborative effort of caseworker, psychologist and psychiatrist, can furnish a unique service to certain defective children and their families." —I. Altman.

**719. BURR, HELEN G., & MULLENDORE, JAMES M. Recent investigations of tranquilizers and stuttering.** *J. Speech Hearing Disorders*, 1960, **25**, 33-37. Experimentation on the use of tranquilizers is not sufficiently extensive to justify conclusions. However, there may be reduction of stuttering symptoms in many or most subjects. There is nothing, as yet, to justify the conclusion that tranquilizing drugs will cure stuttering, but large-scale studies are urgently needed. —M. F. Palmer.

**720. CADITZ, SYLVAN B. Effect of a training school experience on the personality of delinquent boys.** *J. consult. Psychol.*, 1959, **23**, 501-509. 94 boys committed to a state training school took the MMPI and the EPPS prior to entry and again after an average institutional experience of approximately six months. A group of 97 unselected high school sophomore boys took the same tests and were retested approximately six months later. The findings indicate: (1) The training school experience was not effective in modifying the significant differences between the delinquents taken as a group and nondelinquents which were found before the delinquents entered the training school. (2) Delinquents and nondelinquents do not differ in their basic personality needs as measured by the EPPS. (3) Both groups showed improvement in terms of lower MMPI mean scores when their second test results were compared with the results of their first testing. (4) In the case of the delinquent subgroup comparisons, the boys from broken families were more different from the nondelinquents than were boys from intact families. However, the broken family delinquents benefited more from the training school experience—mainly in terms of better personality organization and stability. Evidence is limited that subgroupings of delinquents, based on severity of offenses, responded differentially to the institutionalization. (5) The variable considered as the most appropriate measure of specifically delinquent traits, the Pd scale of the MMPI, was not materially affected by the delinquents' training school experience, a finding most pronounced in the case of boys from unbroken family backgrounds. —E. E. Levitt.

**721. CHAPMAN, A. H.** (Univer. of Kansas Sch. Med., Kansas City) *Early infantile autism.* *Amer. J. Dis. Child.*, 1960, **99**, 783-786. Early infantile autism is a disorder beginning in infancy and characterized by withdrawal from interper-

sonal relationships, obsessive need to maintain the sameness of the physical environment, preoccupation with things as opposed to people, and various disturbances of language. The prognosis is guarded, particularly in those children who do not learn to speak by the age of 5. The value of treatment in altering the course of this disorder is not proved. It is important that this syndrome be recognized so that these children can be appropriately managed rather than erroneously consigned to the categories of the mentally deficient, the deaf-mute, or the organically brain-damaged. —Author's Summary and Conclusions.

**722. CHOROST, SHERWOOD B., SPIVACK, GEORGE, & LEVINE, MURRAY. Bender-Gestalt rotations and EEG abnormalities in children.** J. consult. Psychol., 1959, **23**, 559. Bender performance rotations of 30° or more were found in brain-damaged children, but the test did not increase accuracy of prediction over the EEG alone. —E. E. Levitt.

**723. DIEDRICH, WILLIAM M., & POSER, CHARLES M. Language and mentation of two phenylketonuric children.** J. Speech Hearing Disorders, 1960, **25**, 124-134. Two sibling cases of congenital aphasia are reported who were later diagnosed as having phenylketonuria. During three years of control on a phenylalanine-low diet, there was noted marked improvement in language as well as in functional mentation. —M. F. Palmer.

**724. ELLIOTT, FRANKLYN. Clinical observations regarding negative practice.** J. Speech Hearing Disorders, 1960, **25**, 196-197. Negative practice has not proved wholly satisfactory. Many boys associated incorrect sounds with doing something bad, producing guilt feelings, intense conflict, and similar negative reactions. The act of liping had a specific negative symbolic value for many of the parents and children. It is important that clinicians consider the psychological forces which are generated and remain active within a child when he is urged to use such a technique as negative practice. —M. F. Palmer.

**725. HAHN, ELISE. Communication in the therapy session: a point of view.** J. Speech Hearing Disorders, 1960, **25**, 18-23. Suggestion that speech therapy sessions should be based on the stimulation of desire to communicate, helping the child to discover the specific improvement needed in his communication, showing him the new way to make the corrected sounds and placing these sounds within the communicative sequence. —M. F. Palmer.

**726. HOBERMAN, SHIRLEY E., & HOBERMAN, MORTON. Speech habilitation in cerebral palsy.** J. Speech Hearing Disorders, 1960, **25**, 111-123. Description of the speech deviations found in cerebral palsied children and the contributing causes together with habilitation techniques now in use at the New York State Rehabilitation Hospital, West Haverstraw. These are adaptations of Bobath, Kabat, Rood, Jacobson, and Westlake. —M. F. Palmer.

**727. HOOD-WILLIAMS, J. The results of psychotherapy with children: a reevaluation.** J. consult. Psychol., 1960, **24**, 84-87. After enumerating several weaknesses in the referent review by Levitt and in the original studies, the author concluded that psychotherapy with children was still of questionable effectiveness—essentially Levitt's conclusion. The frequently cited inadequacies of available baseline estimates for comparison with the rate of improvement in treated cases were mentioned, e.g., that "defector" patients may be less seriously afflicted, or helped by unknown factors, such as changes in the environment or parental attitudes, occurring during the waiting period. That the more recent studies tended to report lower rates of improvement than earlier studies was pointed out and attributed to "dealing with more deep-seated disturbances." Decrying the limited data regarding the length or type of therapy obtained but knowing that the criteria for improvement, the treatment methods, and the methodological analysis differed from study to study, the author maintained that a combination of the results from such divergent approaches was inappropriate. —C. E. Ladd.

728. KOLODNY, RALPH L., WALDFOGEL, SAMUEL, & BURNS, VIRGINIA M. (Boston Children's Ser. Ass., Mass.) **Summer camping in the treatment of ego-defective children.** *Ment. Hyg.*, 1960, 44, 344-359. The authors describe and evaluate a two-summer camping experience as a method of treatment for ego-defective children. Five adolescent girls, two of whom were borderline psychotics, and four of whom had severely damaged egos, attended for 11 days each summer a camp having about 25 same-sex but varying age children. Each of the five are presented as brief case studies. Findings indicated that "if enough caution is exercised in the choice of the children and careful thought is given to their management, it is possible to integrate even quite seriously disturbed children into selected camping programs." Conditions essential to this achievement are described. The authors claim no "cure-all" for children with pathological deviations, but feel that the camping experiences were beneficial enough to warrant consideration as one way of helping them. —R. L. Witherspoon.
729. LEVITT, E. E. **Reply to Hood-Williams.** *J. consult. Psychol.*, 1960, 24, 89-91. It was hypothesized that the decreasing rate of improvement associated with psychotherapy in children during the last three decades may more reasonably be attributed to increased clinical acumen, improved methods, and the use of different types of rating scales than to increased severity of the problems treated. Regarding the baseline estimate and contrary to Hood-Williams's hypotheses, recent evidence was cited indicating that treated and nontreated child patients were comparable in severity of the symptoms and that only about 18% of the defections from treatment were due to improvement during the waiting period, according to the parents. The complexity of the relationship between length, intensity, or type of treatment and degree of rated improvement was emphasized. Time itself is confounded with each of these variables. Moreover, little is known about the type, quality, or duration of treatment actually provided in child guidance clinics; consequently, most sweeping conclusions, such as those made by Hood-Williams, overextend their empirical basis. —C. E. Ladd.
730. LUSTMAN, S. L. **Emotional problems of children in dentistry as they relate to orthodontics.** *Amer. J. Orthodont.*, 1960, 46, 358-362. In terms of the possible infliction of pain or discomfort it is advised to make the child aware that some pain or discomfort will ensue as a necessary part of treatment. —W. M. Krogman.
731. MADOFF, JEFF M. **The attitudes of mothers of juvenile delinquents toward child rearing.** *J. consult. Psychol.*, 1959, 23, 518-520. 50 mothers of institutionalized juvenile delinquents and 57 mothers of healthy youngsters were compared on 20 childrearing attitudes by means of the Parental Attitude Research Instrument. The two groups of mothers differed significantly on 9 of the 20 scales. In all cases of significance, the mothers of the delinquents expressed the more punitive, controlling, and authoritarian attitudes. —E. E. Levitt.
732. MURPHY, LOIS B. (Menninger Foundation, Topeka, Kansas) **Methods of coping with stress in the development of normal children: a research project.** *Bull. Menninger Clinic*, 1960, 24, 97-154. The entire May issue is devoted to this project started by the Menninger Foundation in 1953 and directed by Lois B. Murphy. Several other partial reports have been published, and a book by the entire group of investigators is planned. The present report consists of the following papers: The child's way of coping: a longitudinal study of normal children—Lois B. Murphy. Vulnerability in infants—Grace M. Heider. Children's ways of coping with the intelligence test—Alice Moriarty. The psychiatric examination as part of the coping study—Povl W. Toussieng. Pride and its relation to narcissism, autonomy and identity—Lois B. Murphy. Coping devices and defense mechanisms in relation to autonomous ego functions—Lois B. Murphy. —E. N. Plank.
733. OJEMANN, RALPH H. (Univ. of Iowa, Iowa City) **Sources of infection revealed in preventive psychiatry research.** *Amer. J. publ. Hlth*, 1960, 50, 329-335.



A demonstration that the content taught and the teacher's behavior were "infecting" the child with a noncausal orientation was provided by (1) giving the Problems Situations Test to four classes, a fourth-, a fifth-, and two sixth-grades, (2) giving the teachers a summer training session in which they were supplied with causally oriented teaching content, and (3) noting a statistically significant change in scores on retesting. Scores for a control group did not change. That the more causal type of growth in the experimental group might have been due to the personality of its particular teachers was ruled out as a factor. "... with more causally oriented material in the hands of a trained teacher the growth toward a noncausal orientation as measured in this study can be altered and thus the cycle of infection can be interrupted." —I. Altman.

**734. PEIXOTTO, H. E. (Catholic Univer. of America) Use of the Despert Fables with disturbed children.** *J. clin. Psychol.*, 1960, **16**, 173-179. Based on a comparison of the responses of 83 child clinic patients with normal groups, it seems that the Despert Fables are unsatisfactory as a means of differential diagnosis. In most cases both the normal and patient groups have the same "popular" responses. In some instances there are significant differences between the two groups on these popular responses but none has sufficiently high reliability for a particular diagnosis. Differences among the "popular" responses occur for 7 Fables: II, III, VII, VIII, XII, XVIII, and XX. In 6 of these Fables: II, VII, VIII, XII, XVIII, and XX, significant differences were found between both the popular and unusual responses. Significant differences occur for the unusual responses alone on 11 of the 20 Fables. These are Fables: I, IV, V, VI, IX, X, XI, XIII, XV, XVI, and XIX. When the 6 fables mentioned above having differences for both the popular and unusual responses are included here it is evident that by far the majority of significant differences occur among the unusual responses. Two fables, XIV and XVII, do not discriminate between the patient and normal groups at all. In view of these results it appears that the Despert Fables may reflect certain psychodynamic content of a child's conscious or unconscious, but that they are of little value for differential diagnosis. It may also be concluded that the psychodynamic content of patients and nonpatients varies very little and that there is no simple etiology for emotional upsetness in children. This conclusion is in disagreement with that of Despert and Fine; this may be because of the limited comparisons made in their studies. —Author's Summary.

**735. RAPH, JANE BEASLEY. Determinants of motivation in speech therapy.** *J. Speech Hearing Disorders*, 1960, **25**, 13-17. Review of literature on motivation and its implications for speech therapy. —M. F. Palmer.

**736. ROSENBLUM, SIDNEY, BUONCIONTO, PASQUALE, & GRAHAM, BRUCE D. (Wayne Co. Training Sch., Northville, Mich.) "Compazine" vs. placebo: a controlled study with educable, emotionally disturbed children.** *Amer. J. ment. Def.*, 1960, **64**, 713-717. 36 mentally retarded children (CA about 12) were divided into three equal groups matched for age, IQ, length of institutional residence, and socioeconomic status. For a three month period one group received Compazine, another placebo, and another nothing. Measures of intellectual functioning, manifest anxiety, and rated behavior were obtained pre- and post-experimentally. All groups improved significantly in intellectual performance. None evidenced a reduction in anxiety. Few significant differences in rated behavior were found. —From Authors' Summary.

**737. SELZER, MELVIN L. (Univer. of Michigan, Ann Arbor) The happy college student myth.** *Amer. Arch. gen. Psychiat.*, 1960, **2**, 131-136. A diagnostic survey of all students seen by three psychiatrists at the Mental Hygiene Clinic of the University of Michigan revealed nosological information somewhat contrary to expectation. Referral sources were varied, but the self-referred accounted for approximately 40%. Physicians referred 29%, and 9% were referred by the faculty. The remaining 22% were referred by the deans, dormitory staff members, and academic counselors. Of 506 students interviewed by the psychiatrists on the clinic staff, 35.4% were

psychoneurotic, 24.5% had personality disorders, and 21.7% were schizophrenes. Adjustment reactions comprised only 8.3% of the disorders noted. Thus, 81.6% of the patient group fell into the three major psychodiagnostic categories. The diagnostic data, when compared with previously published data, suggest that students at college mental hygiene clinics may be underdiagnosed. There is reason to believe that patients seen by a college health service psychiatrist are diagnostically comparable to patients encountered in any outpatient psychiatric clinic accessible to the general public. —Author's Summary.

**738. SLACK, CHARLES W.** (Harvard Univer., Cambridge, Mass.) **Experimenter-subject psychotherapy: a new method of introducing intensive office treatment for unreachable cases.** *Ment. Hyg.*, 1960, **44**, 238-256. Experimenter-subject psychotherapy is presented as a new method for introducing intensive office treatment for unreachable male delinquents. While conclusions are based on only 11 subjects and no experimental evidence, the method presents an interesting and challenging approach to a very difficult problem. Basically, the approach places the therapist in a new role, one acceptable to the delinquent and to the street gang. The delinquent is not "referred" but rather is "employed" to assist in some research. Contact is made by having some responsible person who knows the subject call the experimenter for the subject by telephone. The experimenter asks to talk directly to the subject. From then on the subject's role is information giver and helper in problems of his own choosing. The author claims considerable success with otherwise unreachable delinquents. Any of the conventional therapy techniques may be used if desired as the "research" progresses. 15 advantages over traditional techniques are listed. —R. L. Witherspoon.

**739. STOTT, D. H.** (Glasgow Univer.) **Delinquency, maladjustment and unfavorable ecology.** *Brit. J. Psychol.*, 1960, **51**, 157-170. The dichotomy of psychological and sociological delinquency is criticized. To determine to what extent delinquency is purely cultural, the prevalence of psychological factors was investigated in 415 Glasgow boys under 15 years of age and on probation for the first time and 404 controls from the same public schools. Teachers rated the boys on a social adjustment scale and found marked differences between the groups. Contrary to theories of "cultural delinquency," the probationers from high delinquency areas were as maladjusted as those from "good" areas—i.e., were not simply conforming adaptively to a delinquent environment. But the nondelinquents were consistently less well adjusted the greater the geographic density of delinquency. "It is suggested that delinquency is mainly an aspect of more general behavior disturbance in the under-privileged quarters in large cities, and that this in turn is only one of several consequences of unfavorable ecology." —R. N. Walker.

**740. THORNE, FREDERICK C.** (Brandon, Vermont) **Tutorial counseling with mental defectives.** *J. clin. Psychol.*, 1960, **16**, 73-79. Problems in testing the mentally defective are discussed. It is suggested that the functional intelligence of the defective individual may be considerably improved if he can be taught to act in a particular situation as a more intelligent person would do. The mentally defective individual is easily demoralized and becomes reluctant to expend additional effort to learn. Consequently, he is easily rejected by teachers and peers. Frequently, an educational impasse is reached at this point, and it is at this time that special tutorial education and counseling should be implemented. The author indicates that "educating the defective is much like photography on a dull day, the subject must be exposed longer to the material to be learned." There are brief discussions of necessary conditions for learning. These include: suitable conditions for learning, use of rewards, practice periods, individual prescriptions, tutorial methods, principle of over-learning, directive methods, communication, and organismic learning. Five case excerpts were presented in order to demonstrate tutorial counseling. In each of these cases tutorial counseling aids the mentally defective individual in coping with frustrations and behaving in a more intelligent manner. In order to achieve this the

mentally defective individual needs to recognize his inadequacies and accept the authority and help from those about them. —A. M. Kaplan.

**741. THORPE, J. G.** (Banstead Hosp., Sutton, Surrey) **Neuroticism in children. II. Identification and measurement of a neuroticism factor.** *Brit. J. Psychol.*, 1960, **51**, 153-155. An earlier report showed that scores made by neurotic and control children on the Maudsley test battery were to a large extent determined by the test setting: school or clinic. Scores of the same 34 neurotic and 106 control children are now intercorrelated, with age partialled out, and five factors extracted. None of these factors could reasonably be labeled neuroticism. When one factor was rotated to maximal correlation with the criterion neuroticism measures an  $r$  of .49 was achieved. Factor scores failed to differentiate the neurotic and control groups of children at the .05 level. —R. N. Walker.

**742. WASSERMAN, SIDNEY.** (Jewish Children's Bureau, Cleveland, Ohio) **Case-work treatment of a homosexual acting-out adolescent in a treatment center.** *Ment. Hyg.*, 1960, **44**, 18-29. By means of a detailed case study of an adolescent boy whose primary symptom was homosexual acting-out behavior, evidence is presented to indicate the effectiveness of casework treatment within the controlled setting of a residential center. Attesting to the success of the treatment, the author concludes "this combination of effort—psychiatric consultation, casework supervision and casework—brought this case to a successful close." —R. L. Witherspoon.

**743. WATTS, HUGH G., & DAVIS, JOHN M.** (Harvard Med. Sch., Boston, Mass.) **Attitudes toward psychiatry.** *Ment. Hyg.*, 1960, **44**, 74-78. In an effort to determine college students' attitudes toward psychiatry, 140 randomly selected undergraduate students in a private, all-male, eastern university were subjected to an interview consisting of 15 sections. While only 8% responded unfavorably to "What is your attitude toward college counseling?", when asked "When do you think it is justifiable to seek help?", 59% answered, "As a last resort." When listing people and places where a student could go for counseling, only 20% thought of the university psychiatrist. In fact, only 30% were aware, before the interview, that there was a university psychiatrist. However, 56% would go to a psychiatrist with a "serious" problem. Items dealing with knowledge of the role of a psychiatrist showed that many students did not have a very clear concept of psychiatric problems for 36% did not perceive of the psychiatrist handling such symptoms as "Feels extremely depressed, and that the world has lost its meaning." It was concluded that "there appears to be a highly ambivalent feeling toward psychiatric counseling in college." Acceptance seemed to be largely on the intellectual level as there existed underlying negative feelings toward psychiatry. —R. L. Witherspoon.

**744. WOODWARD, KATHARINE F., BROWN, DOROTHY, & BIRD, DUDLEY.** (Lenox Hill Hosp., New York City) **Psychiatric study of mentally retarded preschool children.** *Amer. Arch. gen. Psychiat.*, 1960, **2**, 156-170. The results of an exploratory psychiatric program for nine retarded preschool children are summarized at the end of the fourth year. The children selected were without demonstrable organic basis for the retardation. The program consisted of nursery school sessions, psychiatric treatment of the children, and either psychiatric or social work treatment of the parents. Eight of the nine children showed changes of a positive nature which enabled them to function more effectively than they had done before the program was begun. Two of the children were able to enter first grade approximately at normal age. The child who showed no appreciable gain attended irregularly, and in the first year only. Four of the children, under continuing study, appeared to fit into the diagnostic category of childhood schizophrenia. The other five children did not fit clearly into any previously described category. Their capacity for social relations was much greater than that of the typical schizophrenic child. Their clinical picture included negativism, depression, and many neurotic traits. Problems for consideration in future studies are formulated, and criteria are tentatively set up for the selection of children, some of whom may prove to be pseudo-retardates who are treatable. —Authors' Summary.

**745. ZUCKERMAN, MARVIN** (Brooklyn Coll., N.Y.), **BARRETT, BEATRICE H., & BRAGIEL, RAYMOND M.** **The parental attitudes of parents of child guidance cases: I. Comparisons with normals, investigations of socioeconomic and family constellation factors, and relations to parents' reactions to the clinics.** *Child Development*, 1960, **31**, 401-417. The purposes of this study were: (a) to determine if parental attitudes differ quantitatively in parents of child guidance cases and normals or if they distinguish between parents of various types of cases in the clinic group; (b) to determine the influence of socioeconomic, age, and family constellation factors on attitudes within the clinic group; (c) to determine if parental attitudes have any predictive value in relation to the cooperativeness of parents with the clinic. The subjects were 165 mothers and 140 fathers of patients from two child guidance clinics and 181 mothers and 36 fathers from a normative sample. Attitudes were measured with the Parental Attitude Research Instrument using the forms for mothers and fathers. Two summative factor scores on the maternal attitude inventory and scores on the individual scales of the maternal and paternal inventories were used. Other variables were assessed by psychologists from the case history reports. Parental attitude measurements were not markedly related to the child's diagnosis or symptom type within the clinic group and did not yield marked differences between the clinic parents and controls. Parental attitude scores neither predicted the parents' cooperativeness with the clinics nor distinguished a group of "defectors." The major determinant of maternal attitudes within the clinic group was the socioeconomic level of the mother as defined by her educational level and her husband's occupation. The less educated lower class mothers had the more authoritarian, controlling attitudes. The mother's age was significantly related to her attitudes, although in a nonlinear fashion. The age of the clinic child, the number of children in the family, and the sex of the children in the family were significantly related to parental attitudes, but such relations appeared to be a function of the relation of these variables to the mother's education. —Authors' Summary.

**746. ZUK, G. H.** (St. Christopher's Hosp. for Children, Philadelphia, Pa.) **Psychodynamic implications of self-injury in defective children and adults.** *J. clin. Psychol.*, 1960, **16**, 58-60. The author presents brief case excerpts of 5 individuals who are mentally retarded and who were observed in self-injurious behavior. One child was observed screaming, moaning and pulling violently at her own hair. Another child was observed sitting on a chair striking himself on the side of his face with his fist. Still another child was described as one who would bang her head against the floor and bite her hands. The author explains this behavior within the psychoanalytic framework. He conceptualizes a breakdown of identification of the ego and body. The body becomes perceived as an object in the environment rather than a part of the self. When aggression cannot be expressed directly against the true object, it is directed toward the most accessible object—his own body. —A. M. Kaplan.

#### PUBLIC HEALTH AND HYGIENE

**747. BENIRSCHKE, KURT.** (Boston Lying-in Hosp., Mass.) **Routes and types of infection in the fetus and the newborn.** *Amer. J. Dis. Child.*, 1960, **99**, 714-721. A review of the "routes by which infection may reach the fetus and newborn infant" and of the "principal types of infection . . . in this period of life."

**748. CANN, HOWARD M., & VERHULST, HENRY L.** (Public Health Service, Washington, D. C.) **Accidental poisoning in young children—the hazards of iron medication.** *Amer. J. Dis. Child.*, 1960, **99**, 688-691. Three fatal and two nonfatal cases of iron poisoning in young children are presented. In one nonfatal case exchange transfusion was performed. The underlying mechanism, clinical manifestations, and treatment of iron poisoning are discussed. Proper storage and disposal of iron medication and safety closures on containers will help protect young children from poisoning. —Authors' Summary.

**749. CHENOWETH, ALICE D.** (Children's Bureau, Washington, D.C.) **Post-natal period—general scope.** J. Amer. med. Ass., 1960, **172**, 419-422. The number of births in hospitals in the United States in 1957 was five times that in 1935. The average duration of the patient's stay in a maternity hospital has been shortened substantially, but it is probable that the lag in growth of facilities, the lack of personnel, and higher costs are in part responsible for the shorter stay. A shortage of professional nurses has necessitated increased use of auxiliary personnel. Early dismissal of the patient deprives her of some undeniable benefits of hospitalization and increases the responsibilities of the family physician. If the postpartum period is thought of as but one stage in the continuing health care which all women need throughout a lifetime, these trends should be viewed with concern. —Journal Summary.

**750. DAVIS, M. EDWARD.** (Chicago Lying-in Hospital, Ill.) **Progress in the management of labor and delivery.** J. Amer. med. Ass., 1960, **172**, 409-413. Sharp reductions in maternal and infant deaths have taken place in the last 25 years. Much of this success is due to parent education for childbirth, decrease in the incidence of prolonged labor, elimination of the injudicious use of analgesic drugs, and selection of the proper mode of delivery. The incidence of birth trauma resulting in perinatal mortality has decreased markedly, but breech presentation still poses a problem as do the cause of preeclampsia and eclampsia and reduction of the incidence of cerebral palsy. "In the foreseeable future it should be possible to control the entire labor mechanism by new knowledge about the hormones which regulate the reproductive process." —I. Altman.

**751. DEISHER, ROBERT W.** (Univer. of Washington, Seattle), & **JUSTICE, R. S.** **Effectiveness of community resources in helping mentally retarded children.** Amer. J. publ. Hlth, 1960, **50**, 43-49. The Clinic for Child Study at the University of Washington is described and an analysis of its first 148 cases is presented. The largest number of referrals, 62, came from private physicians, the second largest from schools, 32, including referrals from social worker, psychologist, and school nurses. Upper age limit was set at 8 years. The child on first visit is seen by nurse, pediatrician, and psychologist. Appointments for interviews are made with the psychiatrist, nutritionist, dental hygienist, and the speech and hearing consultant. The clinic team then discusses the child in conference and plans for the child and his family. Re-evaluation one year later showed the program to have been fairly successful insofar as implementation of recommendations was concerned. Least successful was the referral for psychiatric therapy, made for 8 children found to be only moderately retarded. The parents "preferred to believe that their child was basically mentally defective rather than that it was simply functioning at a defective level on the basis of emotional problems." There was also some reluctance on the part of psychiatric facilities to provide services to these children. —I. Altman.

**752. ENGELKE, OTTO K.** (Univer. of Michigan, Ann Arbor), **HEMPHILL, FAY M., BUSHILL, ELIZABETH, & McKINNEY, E. BELLE.** **A survey of tuberculin and histoplasmin reactors among school children of Washtenaw County, Michigan.** Amer. J. publ. Hlth, 1960, **50**, 368-379. A program of histoplasmin testing was undertaken to study the distribution of positive reactors and the rate of reaction to both histoplasmin and tuberculin, and to explore the hypothesis that histoplasmosis was disproportionately distributed between areas within the county, which is located in southeastern Michigan. 19 schools and 9,098 school children participated, 7,370 white, 1,650 Negro, and 78 other. In one area, Milan, the rate of histoplasmin positive reactors was found to be overwhelmingly greater than elsewhere in the county. The positive reaction to histoplasmin was shown, statistically, to be independent of the reaction to tuberculin. The gradient by age in the Milan area showed a precipitous rise in percentage from year to year for ages 6 through 9, then a decrease in percentage for two years, and again a precipitous rise to age 14. While approximately three times the rate of positive tuberculin reactors was found among the Negro participants as compared with the white, the rate of positive

reactors to histoplasmin was slightly less among the former as compared with the latter. "These studies provide additional evidence to show that careful examination of chest films might profitably be supplemented by other tests in any differential diagnosis between histoplasmosis and tuberculosis, especially for residents of areas known to have high rates of histoplasmin reactors." —I. Altman.

**753. GELFAND, HENRY M.** (Public Hlth Ser., Chamblee, Ga.), LeBLANC, DOROTHY R., POTASH, LOUIS, CLEMMER, DOROTHY I., & FOX, JOHN P. **The spread of living attenuated-strains of polioviruses in two communities in southern Louisiana.** Amer. J. publ. Hlth, 1960, **50**, 767-778. Living, attenuated poliovirus type 3 (Sabin vaccine) was administered orally early in June to all children in a group of families in two lower economic Negro communities in southern Louisiana which prior serologic study had shown to lack widespread natural immunity to this virus type. At the same time, in a group of similar families chosen to be the indicators of contact infection, a placebo material was fed. Study of frequent, routine fecal specimens from all children served to indicate primary and contact infections. Excretion of homologous virus occurred in 90% of vaccine-fed children, and in 39% of contact children during the succeeding seven weeks. Many concurrent "wild" enterovirus infections were detected. The failure of the vaccine strain to infect a larger proportion of the contact children was attributed in part to viral interference and in larger part to a lower infectiousness of the vaccine strain as compared with "wild" polioviruses. No illness of any sort could be associated with primary or contact poliovirus infection. —Authors' Summary.

**754. GEZON, HORACE M.** (Univer. of Pittsburgh, Pa.), ROGERS, KENNETH D., THOMPSON, DONOVAN J., & HATCH, THEODORE F. **Some controversial aspects in the epidemiology of hospital nursery staphylococcal infections.** Amer. J. publ. Hlth, 1960, **50**, 473-484. Observations in an Allegheny County, Pennsylvania, general hospital over a period of 18 months led to the following findings: "An isolated or single demonstration of a sudden decrease in incidence of either staphylococcal disease or infection following institution of specific control measures does not constitute proof of the effectiveness of such control measures . . . both the persistency of carriage of staphylococcus and persistency of type were quite inconstant in nursery personnel . . . babies acquired infections with staphylococcal phage types not isolated in semiweekly cultures from nursery personnel . . . at least in this nursery, infants cared for by personnel who were carriers of phage typable staphylococci were not at greater risk of infection than were infants cared for by noncarriers . . . there was no location in this particular nursery which seemed to be particularly disadvantageous to infants . . . there was no evidence that a two-fold increase in nursery space allowance per baby had any appreciable effect on either the incidence of disease or infection in the newborn infants in this study . . . under the conditions of this experiment, the use of measures designed to increase asepsis failed to reduce the incidence of both disease and infection in the infants." —I. Altman.

**755. INGALLS, THEODORE H.** (Sch. Medicine, Univer. of Pennsylvania, Philadelphia) **Prenatal human ecology.** Amer. J. publ. Hlth, 1960, **50**, 50-54. An extensive list of disorders of the pregnant woman that may carry or are at least suspect of carrying a risk for the infant. Among the disorders are rubella, influenza, mumps, and diabetes. A plea is made for more intensive concern with prenatal human ecology; it presents an almost limitless frontier for research and practice. —I. Altman.

**756. KNOX, G.** (Univer. of Birmingham) **Secular pattern of congenital oesophageal atresia.** Brit. J. prev. soc. Med., 1959, **13**, 222-226. The question of clustering of events in time is discussed in relation to the occurrence at Birmingham and at Newcastle of tracheo-oesophageal fistula and/or oesophageal atresia. Attempts are made to apply direct critical tests for epidemicity, but an oblique approach is finally used to reach the conclusion that true clustering occurs. It is suggested that the disease may have an infective origin similar to that of the congenital malformations which have been seen to follow maternal rubella. —Author's Summary.



**757. MENDENHALL, MAX K.** (Kelly Air Force Base, Texas), **JENICEK, JOHN A., & BRYANT, JOHN M.** **Thermal decomposition of ether in the infant incubator.** *J. Amer. med. Ass.*, 1960, 173, 651-653. It was noticed at Brooke Army Hospital by anesthesia and recovery suite personnel that when an infant who had received ether as the primary anesthetic agent was placed in the incubator unit, a pungent odor, unlike that of ether alone, was generated. Coughing, sneezing, and other signs of respiratory tract irritation was manifested. It was found that diethyl ether, exhaled by the infant during recovery from anesthesia, could be decomposed by contact with the electrical heating element in the incubator. "Adult rabbits anesthetized with open drop ether were placed in the incubator under ordinary operating conditions of the unit. Formaldehyde concentrations as high as 370 ppm were reached. Limits of concentration for formaldehyde gas in industrial plants are set within the range of 5 to 10 ppm. Toxic effects on the respiratory tracts of post-anesthetic patients may result from the formaldehyde concentrations reached in the incubator." —I. Altman.

**758. PERKINS, GEORGIA B.** (Children's Bureau, Washington, D.C.), & **CHURCH, GERTRUDE M.** **Report of pediatric evaluations of a sample of Indian children—Wind River Reservation, 1957.** *Amer. J. publ. Hlth*, 1960, 50, 181-194. Pediatric evaluation was made of a sample of 214 children under 13 years of age on the Wind River Reservation in central Wyoming. Of the total, 201 were found to require follow-up of some kind: 19 required immunization only; 24 for dental care only; 26 for medical care only; 21 for both immunization and dental care; 31 for immunization and medical care; 58 for dental and medical care; and 22 for immunization, dental, and medical care. Thus, 93 needed immunization, 125 dental care, and 137 some kind of medical care. Chief reason for medical care was otitis media (37 children); second most prevalent problem was visual defect (23 children). Most of the dental needs were related to dental caries, but serious malocclusion was frequently noted. Only 53% of the children had had complete DPT immunization and only 36% were protected against smallpox. A fifth of the children were found to have pinworm ova. Time spent in reviewing previous medical, nursing, and social service findings was a valuable prelude to evaluation as well as a good casefinding method for preventive medical care. —I. Altman.

**759. PLEYDELL, M. J.** (Co. Med. Office of Hlth, Oxfordshire) **Anencephaly and other congenital abnormalities. An epidemiological study in Northamptonshire.** *Brit. med. J.*, 1960, 1, 309-315. An epidemiological study in Northamptonshire provides evidence that anencephalic births are related to the density of the population. The incidence of anencephaly in urban districts is double the incidence in rural districts; the incidence in the industrial belt is three times the incidence in the rest of the county. A definite feature of anencephalic births is that they occur in groups in time and space. It is suggested that the association between anencephaly and social class, season of the year, density of population, and the groupings of births is best explained on the basis of an infectious causation. —From Author's Summary.

**760. SAVILLE, PAUL D., & KRETCHMER, NORMAN.** (New York Hosp.-Cornell Med. Center, New York City) **Neonatal tetany: A report of 125 cases and review of the literature.** *Biol. Neonatorum*, 1960, 2, 1-18. A review of 125 cases of neonatal tetany occurring over an 18-year period indicated: The disease occurred more frequently in males and in infants born in the first quarter of the year. Neonatal tetany in the first two days of life was related to traumatic factors during labor while, in cases at the fifth or sixth days postnatally, dietary factors were also important. Fatalities with hypocalcemic tetany occurred in 9 cases; 7 cases had an associated fatal disease while in only 2 cases tetany may have directly caused or precipitated death. Serum calcium below 9 mg. / 100 ml. is the usual chemical finding, while serum phosphorus only tends to be raised. The effect of treatment was difficult to evaluate, but oral administration of calcium chloride was possibly the most effective form of therapy. Since one child with the adrenogenital syndrome had

neonatal tetany, it is believed that excessive secretion of hydrocortisone by the infant can be eliminated as a direct causative agent. —D. H. Eichorn.

**761. SCHWARTZ, SAMUEL** (Dept. of Public Hlth, Washington, D.C.), & **WEST, HOWARD**. **Potentialities and limitations of medical data on official birth certificates.** Amer. J. publ. Hlth, 1960, **50**, 338-345. Intensive activity on the part of the District of Columbia health department has increased completeness and accuracy of reporting on a medical supplement to the birth certificate, so that important analyses of neonatal death rates can be made. The neonatal mortality for live births to mothers who had received no prenatal care was almost two and one-half times that for all live births, 48.8 as against 20.8. Low economic status per se was found to play no role in this association between lack of prenatal care and neonatal mortality. "Even more significant, it played no direct role whatsoever in neonatal mortality." Complications of pregnancy were also a subordinate factor in this relationship. Among neonatal deaths whose mothers had no prenatal care over 80% had birth weights under 2,501 grams. —I. Altman.

**762. SMITH, CLEMENT A.** (Harvard Med. Sch., Boston, Mass.) **The newborn infant.** J. Amer. med. Ass., 1960, **172**, 433-434. The recent tendency for the infant mortality to rise would indicate that there are problems of the newborn that are not being met. The rate was 26.0 per 1000 live births in 1956, 26.4 in 1957, and 26.9 in 1958. Intensive study of local situations is called for. Staphylococcal infections constitute a major and increasing problem. The author urges that infants be followed for infections after discharge, that cultures be made in all suspicious cases, that specific bacteriological diagnoses be made on individual cases rather than mass cultures on total groups. Other problems that are mentioned are the cause and care of the hyaline membrane syndrome, the improvement of criteria for selecting infants likely to require exchange transfusions in cases of hyperbilirubinemia, and the elimination of iatrogenic disease by the most diligent precautions against side-effects of drugs and unsafe procedures. Attention to newborn infants "must now be more than ever individualized." —I. Altman.

**763. SMITH, I. McD.** (Royal Edinburgh Hosp. for Sick Children) **Incidence of intussusception and congenital hypertrophic stenosis in Edinburgh children.** Brit. med. J., 1960, **1**, 551-552. Between 1950 and 1958, various hospitals in Edinburgh admitted 205 children with congenital hypertrophic pyloric stenosis. In each case, the diagnosis was confirmed by operation or necropsy. This was an incidence of 3.06 per 1000 live births. —W. W. Sutow.

**764. WARD, B.** (Nottingham Educ. Committee), & **HUNTER, W. M.** **The absent testicle. A report on a survey carried out among schoolboys in Nottingham.** Brit. med. J., 1960, **1**, 1110-1111. In a survey conducted during 1957-1958 by five medical officers in the schools of Nottingham Education Committee, the incidence of undescended testicles was determined in 19,074 boys 5, 8, 11, and 14 to 17 years of age. In 1957, the total incidence of undescended testicles was 2.29% at 5 years, 6.23% at 8 years, 5.42% at 11 years, and 0.41% at 14 to 17 years. In 1958, the incidences were 1.15%, 2.40%, 4.05% and 0.23% in the same age groups. It was suggested that the fall in incidence in the oldest age groups represents natural descent of testicles into the scrotum at puberty. —W. W. Sutow.

**765. WELLIN, EDWARD** (Amer. Publ. Hlth Assoc., New York City), **SCOTT, ALISON B.**, **JOHNSON, GERTRUDE C.**, **MARKS, JOANNE**, **BLISS, MONTE**, **GOLDSTEIN, SIMONE**, **CASO, ELIZABETH K.**, & **STERNFELD, LEON**. **Community aspects of mental subnormality—A local health department program for retarded children.** Amer. J. publ. Hlth, 1960, **50**, 36-42. The Cambridge, Massachusetts, Service for Retarded Children is described. A distinguishing feature is its location within a local health department. The retarded child usually requires multiple services which the department can provide or procure from available community resources. The health department is in a better position than most agencies to gain entree into the family situation; realistic plans cannot be made for the child

without considering the problems of the total family unit. "By its very nature, the public health agency can provide more than simply a one-shot diagnosis of 'mental retardation.' Extending to retarded or other handicapped children the same approach it routinely applies to well children, the public health agency can carry out continued supervision and long-term follow-up. Inherent in this continuity of care is the possibility of periodic reassessment of the child's functioning and his potential for further development." —I. Altman.

## HUMAN BIOLOGY AND DEMOGRAPHY

766. COOK, I. A. (Southern Gen. Hosp., Glasgow), & DOUGLAS, A. S. **Demonstrable deficiency of Christmas factor in two sisters.** Brit. med. J., 1960, 1, 479-482. Two sisters, daughters of a man with Christmas disease, both had demonstrable deficiency of the Christmas factor. Findings were in accord with the present concept that Christmas disease is inherited as a sex-linked recessive trait. —W. W. Sutow.

767. DAWSON, SHELTON P. (2122 Wilshire Blvd., Santa Monica, Calif.), HICKMAN, ROBERT O., & KELLEY, VINCENT C. **Galactosemia.** Amer. J. Dis. Child., 1960, 100, 93-97. Four generations in the family of a galactosemic infant were studied by manometric enzyme assay for the presence of erythrocyte galactose-1-phosphate-uridyl-transferase. The involved infant had no detectable activity of this enzyme, and both of his parents, his maternal grandmother, and his maternal great grandfather had reduced activity of the enzyme. The data presented are in accord with the concept that galactosemia is inherited as a simple recessive characteristic. —Authors' Summary.

768. EISNER, V. (Johns Hopkins Univer. Sch. Med.), PAULI, L., & LIVINGSTON, S. **Hereditary aspects of epilepsy.** Bull. Johns Hopkins Hosp., 1959, 105, 245-271. Interviews were obtained with members of the families of 669 epileptics with 3362 close relatives, and 470 control patients with 2858 close relatives. A small but significant familial aggregation of idiopathic major motor epilepsy was demonstrated. This aggregation appeared to vary with the age of onset of the proband's epilepsy, and was highest when the proband's epilepsy started between the ages of 0 and 3½ years, and 9½ and 15½ years. No familial aggregation could be demonstrated when the age of onset was over 15½ years, nor in other types of epilepsy. Simple febrile convulsions were not included in the study. Hereditary transmission of epilepsy could not be demonstrated, but it could not be ruled out. Familial aggregation of idiopathic major motor epilepsy may be due to familial aggregation of perinatal brain injury, to inheritance, or to a combination of these factors. Further studies of the prospective type are probably needed to clarify this, unless a test or trait more related to the "basic defect" can be found. Risk tables are presented. The highest risk we found was to close relatives of probands who developed major motor epilepsy before 3½ years of age: 7.6% of these relatives may be expected to develop major motor seizures by 19½ years of age, and 9.4% by 39½ years of age. Comparable control risks were 1.4% and 2.3%. —Authors' Summary.

769. GARN, S. M., LEWIS, A. B., & POLACHEK, D. L. **Sibling similarities in dental development.** J. dent. Res., 1960, 39, 170-175. In a study of 170 white Ohio-born siblings, from 62 nuclear families, with 175 sibling pairings, serial dental radiographs were used. Calcification stages of lower Pm1-2, M1-2, and where possible M3, were secured: (1) initial calcification, (2) beginning root formation, (3) apical closure. Two movement stages were noted: (1) alveolar eruption; (2) attainment of occlusal level. Correlations for tooth calcification and tooth movement in siblings were of the order of +0.30, in monozygotic twins  $r = +0.91$ , in dizygotes  $r = +0.33$ . It is suggested that "the timing of tooth development is in large part gene-determined." —W. M. Krogman.

770. HIGGINS, JAMES V. (Univer. of Minnesota, Minneapolis) **A study of intelligence of the Nam family in Minnesota.** Amer. J. ment. Def., 1959, 64, 491-504. This is a follow-up of the Nam family in Minnesota, originally studied and reported in New York State in 1912. Results include reproductive rates, intelligence, the relationship of intelligence to siblings and near relatives, correlates of occupational status, and other variables. —From Author's Summary.
771. JENSEN, ARTHUR R. **A statistical note on racial differences in the Progressive Matrices.** J. consult. Psychol., 1959, 23, 272. The author shows that there was an error in the statistical analysis of Progressive Matrices data carried out by Sperrazzo and Wilkins (J. consult. Psychol., 1958, 22, 35-37), so that there actually is a significant race difference on the test. The author suggests several other data analyses which might be revealing. —E. E. Levitt.
772. MacGILLIVRAY, RONALD C. (Lennox Castle Hosp., Near Glasgow, Scotland) **Mongolism in both of monozygotic twins.** Amer. J. ment. Def., 1959, 64, 450-454. The fourteenth pair of monozygotic mongol twins is reported. The importance of accurate zygoty diagnosis is stressed and the methods discussed. It is suggested that examination of head hairs in twins—a method used in forensic work—may be of supplementary value. It is considered that the number of twin pairs so far recorded is inadequate and that twin studies have a considerable bearing on the etiology of mongolism, the theories of which are briefly mentioned. The view is advanced that in mongolism the primary disorder occurs at the oogonia stage and that this opinion is supported by twin studies and recent techniques in examining chromosome morphology. —Author's Summary.
773. MELCHIOR, JOHANNES C. (Walter E. Fernald State Sch., Waverly, Mass.), BENDA, CLEMENS E., & YAKOVLEV, PAUL I. **Familial idiopathic cerebral calcifications in childhood.** Amer. J. Dis. Child., 1960, 99, 787-803. Among the progressive deteriorating diseases of infancy and childhood, a group of diseases is associated with intracranial calcifications. The best-known conditions are tuberosclerosis, hemangioblastosis, toxoplasmosis, hypoparathyroidism, cytomegalic inclusion-body disease, certain tumors, and cysticercosis. The present study deals with another form of the disease associated with extensive calcifications in the basal ganglia and cerebellum. Two families are discussed. In the first one we have had an opportunity to study three patients and one autopsy. In the second family, two siblings were affected and an extensive autopsy study could be made in one of them. The condition with which we are dealing has been known under the term: familial idiopathic nonarteriosclerotic cerebral calcifications. This condition occurs sporadically and apparently on a genetic basis. The term "Fahr's disease" has often been applied to it, but it is shown that Fahr dealt with a sporadic case in an adult while the condition we are describing is a genetic disorder occurring early in infancy. Fritzsche in 1935 was able to present observations on three siblings by x-ray observations. An autopsy on one of Fritzsche's cases was later described by Beyme in 1946. Previous to Fritzsche, Geyelin and Penfield described observations on an operation specimen in a family where apparently five members were affected. A brief review of the literature is given. In a discussion of the etiological factors, it is shown that many different diseases are associated with intracranial calcifications. However, the idiopathic familial cerebral calcifications of infancy and childhood appear to be due to an unknown metabolic disorder. Hypoparathyroidism could be excluded. Although the x-ray features resemble Sturge-Weber hemangioblastosis and some of the pathological aspects are also similar, the essential pathology differs and the idiopathic calcifications cannot be identified with hemangioblastosis. The association with a severe growth disorder and microcephaly and the familial incidence suggest a specific metabolic disorder of a yet unknown nature. —Authors' Summary.
774. SPERRAZZO, GERALD, & WILKINS, WALTER L. **Racial differences on Progressive Matrices.** J. consult. Psychol., 1959, 23, 273-274. The authors acknowledge Jensen's (J. consult. Psychol., 1959, 23, 272) correction of their statistical error

and go on to carry out the analyses he suggested. These show that white children of middle and upper socioeconomic groups tend to score higher on the Progressive Matrices than do Negro children in the same groups. The difference in the lower socioeconomic level is not significant. The authors point out that socioeconomic strata are probably not comparable between races. —E. E. Levitt.

775. STOTT, D. H. (Univer. of Glasgow) **Interaction of heredity and environment in regard to measured intelligence.** Brit. J. educ. Psychol., 1960, 30, 95-102. It is suggested that recent work in experimental biology suggests interaction in the form of facilitation of genetic predisposition by adverse conditions in gestation. This view is developed through an examination of research data on congenital malformations in animals and man, intelligence and prenatal environment, and twins. The value of the hypothesis of facilitation in explaining the interactive effect of heredity and environment on mental development is emphasized. It is concluded that the contributions of heredity and environment can only be retrospectively estimated in individual cases while general quantitative estimates for a population are meaningless. —W. D. Smith.

776. THOMPSON, JOHN H., Jr., SPITTEL, JOHN A., Jr., PASCUZZI, CHRIS A., & OWEN, CHARLES A., Jr. (Mayo Clinic, Rochester, Minn.) **Laboratory and genetic observations in another family with the Hageman trait.** Proc. Mayo Clinic, 1960, 35, 421-427. Three of four siblings in a family of Norwegian extraction were found to lack the Hageman factor. Our studies tend to confirm the impression that the Hageman trait is inherited as an autosomal recessive. Six types of fowl were found to have a defect of blood coagulation resembling the Hageman trait. None of 13 common mammals tested, including the horse, lacked the Hageman factor. The blood of readily available fowl should be useful in the laboratory to aid in the diagnosis of the Hageman trait. —Authors' Summary and Conclusions.

## EDUCATION

777. ANDREW, GWEN (Michigan Dept. Mental Hlth, Lansing), SIBILIO, JOHN PAUL, & STEHMAN, VERNON A. **Utility of the small group discussion method as practiced in certain applied settings.** Amer. J. publ. Hlth, 1960, 50, 785-790. This study proposed to test an hypothesis that the goals of parent discussion groups may be divided into those which are primarily informational and those which fulfill emotional needs. An experimental group of 14 mothers of preschool children met weekly to discuss normal development and behavioral problems of children; they were compared with a control group of 13 mothers who met for recreational activities. Measurements were made through the use of two scales: "A. Rating Your Child's Behavior" and "B. Handling Problems with Your Child." "The discussion group did not change significantly on any measure from beginning to end of the series when compared with a control group of mothers. It was concluded that the instrumental goals of the project were not achieved. It is suggested that the groups are organized and conducted on affective dimensions and that it is unrealistic to expect achievement of instrumental goals with this organization. Differences between mothers' opinions of acceptable child behavior and that which they think experts prefer indicate that mothers do not join groups with expectation of utilizing expert opinion and in a sense have no instrumental goals as defined for the study. —I. Altman.

778. BERTHET, ETIENNE. (Internat'l Children's Center, Paris, France) **Health education in the school.** Amer. J. publ. Hlth, 1960, 50, 64-70. The French Ministry of Education organizes an annual training course for medical officers responsible for school health. The medical branches necessary for a school physician are reviewed and brought up to date. The working of school and university health services are studied from the administrative and technical point of view. Courses are also given at the international level. Additional details are given. —I. Altman.

**779. CONNOR, FRANCES P., & GOLDBERG, I. IGNACY.** (Columbia Univer., New York City) **Opinions of some teachers regarding their work with trainable children: implications for teacher education.** *Amer. J. ment. Def.*, 1960, **64**, 658-670. In response to a questionnaire, 92 teachers of trainable children from public and private day and residential schools gave information about their 1307 pupils, their programs, and their professional status. —From Authors' Summary.

**780. CURR, W., & GOURLAY, N.** (Univer. of Birmingham) **The effect of practice on performance in scholastic tests.** *Brit. J. educ. Psychol.*, 1960, **30**, 155-167. The main object of the investigation was to obtain some measure of practice effect for tests in mechanical reading, reading comprehension, and arithmetic. Standardised tests in these skills were given at varying intervals of time to groups of 9- to 10-year-old children in four primary schools. The statistical analysis employed provided estimates of the mean gains both at the average level of ability for the age group (9.5 years) and two years below average (7.5 years). Practice effect was greatest for reading comprehension. At the 9.5 level, a re-test after one month produced a mean gain of 10.1 months and further re-tests after 3 and 6 months gave gains of 18.2 and 26.9 months, respectively. The corresponding figures at the 7.5 level were 8.9, 10.4, and 12.2 months. For the mechanical reading test, the gains were 5.3, 8.0, and 14.1 months at the 9.5 level and 4.4, 6.2, and 11.8 at the 7.5 level. Practice effect was only slight for the arithmetic test. Practice effect was also estimated for the other cases. In particular pupils tested on both forms of the reading comprehension test at the interval of one month registered gains of 7.2 and 4.2 months at the 9.5 and 7.5 levels, respectively. Reference was made to our earlier investigation into the scholastic results of remedial education. It was pointed out that, in the light of the data here presented, the gains made by the controls in our experiment could be explained entirely in terms of maturation and practice effect. Data are also given to show the impermanence of the net gains made by the pupils receiving remedial education. Corroborative data from another investigation are also presented. —Authors' Summary.

**781. DOUGLAS, J. W. B.** (Univer. of Edinburgh) **"Premature" children at primary school.** *Brit. med. J.*, 1960, **1**, 1008-1013. In a national study of the mental ability and primary school progress of "premature" children a number of striking handicaps were found, which were later shown to be of environmental origin rather than the result of low birth weights per se. The preliminary findings were that premature children: (a) made consistently lower scores than their matched controls in eight tests of mental ability and school achievement (four given at 8 years and four at 11 years); (b) were the subject of more adverse comment than their controls by their teachers in respect to their attitude to work, power of concentration, and discipline in class; (c) were less than half as likely as their controls to gain grammar school places in the 11+ selection examinations. The differences are largely explained by the fact that premature birth is not only associated with poor living conditions but also, at each social level, with low standards of maternal care and lack of educational interest. This study casts doubt on the utility of the method of controlled comparisons in socio-medical studies. —Author's Summary.

**782. FARRELL, M. J., & GILBERT, N. A.** **A type of bias marking examination scripts.** *Brit. J. educ. Psychol.*, 1960, **30**, 47-52. The hypothesis tested was that in examinations involving an element of judgment on the part of the examiner the variance of the marks awarded by an examiner will increase with the number of scripts he marks. The number obtaining first-class honours and the number passing at a lower level than third-class honours on the Cambridge Triposes were studied in relation to the alphabetical order of the examinees names. Scripts were read in alphabetical order; therefore, examinees from A through K were compared with those from L through Z by an analysis of variance. Greater variance was evidenced in the L through Z group on 54 different class lists. Subjects compared were in scientific areas; a larger bias might be expected in more literary and subjective subjects. —W. D. Smith.



**783. HEWITT, E. A. (Univer. of Durham) The performance in English language, at "0" level, of a sample of university students.** *Brit. J. educ. Psychol.*, 1960, **30**, 40-46. Results in the 1953 and 1954 Cambridge examinations in English Language, at "0" level, have been obtained for 1,423 boys and 882 girls, from 197 schools, who were subsequently admitted to universities. Significant differences are shown in the grades awarded to boys and girls, and to arts and science students of comparable age. Linguists achieved significantly better marks than non-linguists, but there is no significant difference between the non-linguists among the arts men and the men who specialised in the "pure" sciences. The failure rates for boys taking the paper for the first time were 1 in 9 for scientists, 1 in 15 for arts students. For girls the corresponding rates were 1 in 42 and 1 in 27. The male scientists who had won open awards to universities were not inferior in English, at "0" level, to arts students in general, though they were inferior to the arts men who won open awards. Among the arts men, those who went to Oxford, Cambridge or London gained significantly better marks than those who entered other universities; a similar difference is found in respect to the men scientists, and of the women arts students. —Author's Summary.

**784. HILLMAN, H. H., & SNOWDON, R. L. (Educ. Dept., County Council of Durham) Part-time classes for young backward readers.** *Brit. J. educ. Psychol.*, 1960, **30**, 168-175. A scheme for the remedial teaching of reading was established to determine whether part-time teachers working with small groups of backward children could significantly improve the reading achievement of their pupils. 130 children of junior school age had been tested and taught under this scheme by April, 1958. The remedial teachers adopted a predominantly "phonic" approach. Comparison was made between the progress of backward children who attended remedial classes and children similarly handicapped who did not. Comparison was also made between the progress of children before and after a period of remedial teaching. The difference in both comparisons was found to be significant at the .01 level. The scheme was found to be acceptable to the schools from which the children came. The results appear to be roughly comparable with the results of similar (and more elaborate) remedial schemes and with the results of teaching retarded children. —Authors' Summary.

**785. KOPPITZ, ELIZABETH MUNSTERBERG. (Endicott, N.Y.) Teacher's attitude and children's performance on the Bender Gestalt Test and Human Figure Drawings.** *J. clin. Psychol.*, 1960, **16**, 204-208. In this study the effect of the teacher's attitude on the performance of the Bender Gestalt Test and Human Figure Drawings by first graders was explored. 16 matched pairs of students from two different classes in the same school served as Ss. The two classes differed primarily in their teachers. One teacher was rigid and authoritarian, the other was permissive and relaxed. The observed behavior in the class rooms revealed a marked contrast, and the expressed attitude and stated preference of school activities by the Ss in the two classes indicated a significant difference between them. The Bender and Human Figure Drawings were administered to all Ss. Both tests were scored in two ways: (a) according to developmental, formal aspects measuring maturation in visual motor perception primarily, and (b) according to emotional aspects reflecting tension, perfectionism, striving, etc. The test scores for the two classes were compared. The findings offer support for the hypothesis that the Bender and Figure Drawings of first graders are not significantly influenced by the teacher's attitude when they are scored as developmental tests. Contrary to prediction the Bender also proved insensitive to teacher attitude when the protocols were scored for emotional factors. Human Figure Drawings on the other hand revealed significant differences between the two classes and seem to reflect the teacher's attitude when scored for emotional indicators. —Author's Summary.

**786. MARTINSON, RUTH A. (Univer. Elem. Sch., Los Angeles) The California study of programs for gifted pupils.** *Except. Child.*, 1960, **26**, 339-343. Preliminary

findings of a three-year study of programs for gifted pupils are presented for 929 students from grade level 1 through 12. Results relative to academic growth, effects on personality and social relations, attitudes of parents, pupils, and teachers are presented. —J. W. Fleming.

**787. OTTERSTÄDT, HERBERT. Akzeleration und Stoffplan.** (Acceleration and curriculum.) *Psychol. Rdsch.*, 1960, **11**, 45-51. The author discusses the educational implications of the discrepancy between accelerated physical development and retarded mental development in comparison to previous generations. The educator is confronted with 16- or 17-year-old pupils according to their physical development and 11- or 12-year-old pupils according to their psychic and mental development. The claim is made that the divergence between physical prematurity and mental retardation becomes increasingly greater. Many of the present day educational problems are considered as being due to this developmental phenomenon. The paper lacks empirical support, claims that the curriculum is too demanding and not child centered, but suggests an investigation of the relationship between physical acceleration and curriculum. —R. E. Muuss.

**788. PIDGEON, D. A.** (Nat'l Foundation for Educ. Res.) **A national survey of the ability and attainment of children at three age levels.** *Brit. J. educ. Psychol.*, 1960, **30**, 124-133. During 1955 some 10,000 children attending maintained or assisted schools in England and Wales were given specially designed tests of reading, arithmetic and non-verbal ability. The children tested formed separate samples in each of three age groups. The age groups and the dates of testing were so chosen that the children in the three samples were: (1) commencing their junior school course (7 to 8 years); (2) ending their junior school course (10½ to 11½ years); (3) in the last year of compulsory education (14 to 15 years). A systematic but unbiased method of sampling was employed which was considered to be effectively random. The aims of the survey were: (1) to obtain reliable estimates of attainments as a base-line for future comparisons; (2) to determine the degree of backwardness in each age group; (3) to compare the levels of attainment of boys and girls, and of children attending schools in urban and rural areas and of various types, e.g., mixed, single-sex, all-age, voluntary. While the results obtained relevant to the first two aims cannot be evaluated until the repeat of the survey, planned for 1960, is carried out, this paper gives some of the more general findings relating to the levels of attainment achieved by the children in the three age groups, and to the differences in performance observed between children in various sub-groups. —Author's Summary.

**789. SMITH, I. MACFARLANE.** (King's Coll., Univer. of Durham) **The validity of tests of spatial ability as predictors of success on technical courses.** *Brit. J. educ. Psychol.*, 1960, **30**, 138-145. The object of this investigation was to assess the validity of two tests of spatial ability against criteria of success on technical courses in a secondary school. Scores on the usual selection tests as well as on a test of spatial ability were correlated with marks obtained in internal and external examinations in a number of technical subjects taken (1) 3 years, and (2) 5 years after the original selection examination. It is suggested that spatial tests make a significant contribution to the prediction of all-round success in the grammar school. —From Author's Summary.

**790. WALLACE, HELEN M.** (Children's Bureau, Washington, D.C.), & **STARR, HELEN M.** **School services for handicapped children in urban areas.** *Amer. J. publ. Hlth*, 1960, **50**, 173-180. Officials in 106 cities with 100,000 population or more were queried in a study to determine the status of school services currently provided to handicapped children. All 98 school systems which replied have some provisions for such children but these vary widely in scope and content and in eligibility requirements. While almost all have provision for children with speech difficulty, the hard of hearing, the partially sighted, and those with rheumatic fever or heart disease, the children with epilepsy, cleft palate, emotional disturbance, deafness, or blindness are less frequently provided for. The number of professional per-

sonnel reviewing applications for educational placement ranged from one in one school system to 12 in another. Where evaluation teams were employed (38%), size of team and type of personnel participating differed substantially. Suggestions are made for strengthening of services. —I. Altman.

### SOCIOLOGY

**791. LYNN, DAVID B., & SAWREY, WILLIAM L.** (Univer. of Colorado, Denver) **The effects of father-absence on Norwegian boys and girls.** *J. abnorm. soc. Psychol.*, 1959, **59**, 258-262. Subjects were 80 mother-child pairs located in typical sailor district. The design consisted of an experimental group (40 mother-child pairs—father absent) and a control group (40 mother-child pairs—father present). Sexes of children in each group were approximately equally divided in number. Children ranged in age from 8-0 to 9-6. A semistructured interview was administered to mothers. Children participated in the Structured Doll Play test and were also requested to draw a family picture. Several criterion frequency scores, based on the above measures, were subjected to chi square tests of significance. The principal results were as follows: (1) Father-absent boys were more immature than father-present boys. (2) Father-absent boys exhibited stronger strivings toward father-identification. (3) Father-absent boys tended to react with compensatory masculinity. (4) Father-absent boys were rated as poorer in peer adjustment than father-present boys and than father-absent girls. (5) Father-absent girls were more dependent on the mother than were father-present girls. "Father-absence appeared to be the determining variable in producing the significant results. However, this interpretation was advanced with caution since other possibly relevant independent variables could not be excluded." —H. D. Holloway.

**792. STEWART, JOSEPH L.** **The problem of stuttering in certain North American Indian societies.** *J. Speech Hearing Disorders, Monogr. Suppl.* 6, 1960, 1-87. Effect of cultural factors in determination and perpetuation of problems in stuttering was studied among the Cowichans of Vancouver Island and compared with the Utes, said not to stutter, on variations in child training. Dimensions investigated in 30 families were nursing and feeding, toilet training, sexual socialization, dependence, aggression and speech and language development. Many significant differences in permissiveness of Ute culture vs. ritually-disciplined Cowichans were found. Speech rituals have declined. The diagnostic use of a term equivalent to the word stuttering seems to exert a direct influence. —M. F. Palmer.

**793. TERRELL, GLENN, Jr., DURKIN, KATHRYN, & WIESLEY, MELVIN.** (Univer. of Colorado, Boulder) **Social class and the nature of the incentive in discrimination learning.** *J. abnorm. soc. Psychol.*, 1959, **59**, 270-272. The purpose was to test the hypothesis of an interaction between social class (middle and lower) and type of incentive (material-present and absent). "... it was believed that a non-material incentive is as effective as a material incentive for middle-class Ss, whereas, for lower-class Ss a material incentive is more effective than a nonmaterial one." A  $2 \times 2$  experimental design involving the conditions given above was used. Each of the four subgroups contains six boys and six girls who ranged in age from 5 to 11 years. Ss underwent appropriate experimental treatments involving the use of a discrimination learning task. The main criterion score was number of trials to a specified training criterion. Chi square tests of significance were applied to the obtained frequency data. As hypothesized at the outset, a statistically significant interaction occurred in the predicted direction between social class and type of incentive. —H. D. Holloway.

**794. VOGEL, E. F.** (Harvard Univer., Cambridge, Mass.) **The marital relationship of parents of emotionally disturbed children: polarization and isolation.** *Psychiatry*, 1960, **23**, 1-12. Nine families with emotionally disturbed children were

compared to a matched control group of nine families with relatively well-adjusted children. All the families except one were from a working-class group. The families were seen for a period of from 1 to 4 years, the control group being seen in the home and the group with disturbed children being seen in a psychiatric clinic. A descriptive analysis of the findings of the study is presented with an emphasis placed on comparing various aspects of the marital relationship. The marital relationship of the parents for all the families with disturbed children was found to be more disturbed than for the control families. The author concludes that many of the marriages for the families with disturbed children probably have been maintained at the expense of the impairment of the personality development of one or more of their children. The child has become the scapegoat for the tensions of the parents' marriage with much of the negative affect of the parents being directed at the child instead of at one another. —A. J. Hafner.

**795. WEAVER, CARL H., FURBEE, CATHERINE, & EVERHART, RODNEY W. Paternal occupational class and articulatory defects in children.** *J. Speech Hearing Disorders*, 1960, **25**, 171-175. 594 children were classified according to the U. S. Census Scale and the Minnesota Scale for Paternal Occupations. Paternal occupational status is significantly related to early speech maturation. More children without articulatory defects come from homes in upper occupational groups. Only the two lowest occupational classes affect significantly the number of articulatory defects. —M. F. Palmer.

### *Book Notices*

**796. AMES, LOUISE BATES, MÉTRAUX, RUTH W., & WALKER, RICHARD N. Adolescent Rorschach Responses.** New York: Hoeber, 1959. 313 p. \$8.50. This book extends the authors' study of Rorschach responses of younger children (see 27: 613). The sample of 50 boys and 50 girls at each age combines the cross-sectional and longitudinal approaches, as did the earlier study, though only a few cases carried throughout the series of testings. The sample is heavily weighted by children from professional homes and on the average is about a standard deviation above the general mean in intelligence. Despite these limitations, the complete presentation of the results enhances the value of the book. The text presents results first according to Rorschach determinants for the age range concerned (10 to 16 years, inclusive). It then presents the responses according to content and according to various performance features observed in the testing situation, such as refusals, card turning, initial exclamations, shock, etc. The larger part of the book is devoted to a year-by-year analysis of responses in the manner to which the reader of the Gesell Institute's material has become accustomed. There is the continuing cyclical turn from integration to deterioration to integration at a higher level through the years of early adolescence. There is sharp typification of each age group, contrasting with the preceding age, differences being conveyed by the comparative forms of the descriptive adjectives used. The data of the total age samples are presented in sufficient detail and with sufficient quotation and illustration for the critical reader to draw his own conclusions, should he not subscribe to Gesellian theory. For each age group completely scored protocols of a boy and of a girl are presented. One chapter contains longitudinal records for a pair of fraternal twins. Discussion and Summary chapters relate general statements of the findings to the psychology of adolescence. —D. B. Harris.

**797. BUROS, OSCAR KRISEN (Ed.) The Fifth Mental Measurements Yearbook.** Highland Park, N.J.: Gryphon Press, 1959. xxx+1292 p. \$22.50. Buros and his

associates have assembled a listing of all recent tests and publications on mental testing in the English language. Included for each test is such information as: title, age range, date of copyright, scoring method, forms, reliability-validity, cost, time, author and publisher. Bibliographical references are included for tests listed; for many of the tests there are one or more 300 to 700 word reviews written especially for this publication, as well as extracted or summarized reviews from standard periodicals. Even though the organization and the table of contents of the Fifth Yearbook are nearly identical to the Fourth, the tests and books reviewed are those which have been published or revised during the period from 1952 to 1958. Consequently, the new volume does not supplant the older publications of this series but supplements them. The Fifth Yearbook again is monumental and its statistics surpass those of the previous issues. The "Tests and Reviews" section lists 975 commercially available tests, of which 698 are reviewed by 350 reviewers. The section "Books and Reviews" contains 485 publications on measurement and related subjects with 535 excerpts from book reviews in 81 journals. A new category of tests "Multi-Aptitude Batteries" has been introduced. These tests, most of them based on factor analytic study, cover a wide range of intellectual abilities and aptitude and assist testees in matters of educational and vocational decisions. Among others, the SRA Primary Mental Abilities is listed in this category and discussed in great detail. One of the PMA reviewers attempts to evaluate systematically the effects of specific criticisms made in the Fourth Yearbook. Since the PMA manuals and profiles have been revised, one can see to what extent Buros' objective, "to impel authors and publishers to place fewer but better tests on the market," has been operative. A comparison of the old and the 1958 manual in the light of the previous criticisms shows that in many instances changes are made that correct the old criticisms; however, other points are either rejected or ignored in the revision. Some time spent in reading the instructions in the preface on how to use this yearbook will be rewarded by more effective use and saving of time in the long run. The volume contains an unusually well organized index and reference system, such as table of contents, classified indexes for tests and books, cross references, indexes of authors' names, publishers and periodicals. Since each new Mental Measurements Yearbook increases in size and weight, becoming bulkier and costlier, the plans for the next issue are to eliminate the bibliographic references for each specific test (there are 6468 up to date) and to discontinue extensive review coverage of tests published in Australia, Canada, England, New Zealand, and South Africa. Test reviewers are asked to give "frankly critical" reviews that combine strength and weaknesses in a judicious manner. A few of the reviews are excessively critical and sometimes in real disagreement with other reviews of the same test. An example in point are two of the reviews of the Kuhlmann-Finch Test. Durost feels "This is the worst looking test published by a major test publisher which the reviewer has ever seen. The art work is poor, and the printing off color, blurred and oftentimes almost illegible." Garrett, another reviewer commenting on the same aspect of the same test, writes "Pictures and diagrams are well drawn, and the material is interesting and clear." One wonders whether both reviewers looked at the same test. Points like this ought to make a test user aware that Buros' book can only provide guidance in the selection of tests and that careful examination and final selection will have to remain the responsibility of the test user. Nevertheless, Buros has again produced another standard work on psychological testing, critical but comprehensive, well organized, interesting and informative. Since the yearbooks are not in competition with any other similar publication, they have become indispensable to many professional groups, especially psychologists, educators, counselling personnel, the student of tests and measurements, and are a "must" for the college library. —R. E. Muuss.

798. CLARKE, ANN M., & CLARKE, A. D. B. (Eds.) **Mental Deficiency. The Changing Outlook.** Glencoe, Ill.: Free Press, 1958. xvi+513 p. \$10.00. This compendious volume of information is the product of two research psychologists, four clinical psychologists, and one speech therapist. Though the authors are English, there is no chauvinistic restriction on their sources of material, ideas, and references.

The book is divided into three sections. The first, *The Background*, includes two chapters: One provides an introduction and outlines social, educational, administrative, and legal provisions. The second presents the results of several prevalence surveys and nicely points up numerous methodological difficulties. The second section, *Theoretical Problems*, covers eight chapters: In addition to presenting the legal classification system in England, a chapter on criteria and classification evaluates various criteria which have been invoked at one time or another. The *Measurement of Intelligence*; Its *Validity and Reliability*, succinctly discusses the assumptions, definitions, rationale, statistical assets and liabilities, and units of measurement involved in the assessment of intelligence, including an examination of the problems of longitudinal measurement. *Genetic and Environmental Studies of Intelligence* considers the rationale and difficulties of the traditional research approach to this problem. Research findings are carefully analyzed to assess the tenableness of alternate interpretations. A chapter on *etiology* reviews evidence and speculation relating to the causes of both the subcultural (biologically normal variants) and pathological defect types of retardation. A chapter on individual differences evaluates the evidence for differences between retarded and nonretarded, as well as between types of retarded. *Learning and Mental Defect* presents a succinct overview of empirical findings. *Brain Damage and Mental Defect* briefly reviews theories of brain function and the adequacy of psychological methods of assessing the presence of such defect. *Cerebral Palsy and Mental Defect* emphasizes various classification systems, etiology, incidence of retardation and types of palsy, associated defects, personality, and education. The third section, *Practical Problems*, also contains eight chapters: *Psychological Assessment* is devoted to giving an overview of types of tests, stressing their strong and weak points and areas of usefulness. *Educational Problems* considers the rationale of and empirical support for teaching methods and carefully stresses the realistic objectives which must be set for individual pupils. *The Abilities and Trainability of Imbeciles* juxtaposes traditional clinical opinion with a series of thoughtful experiments which considerably expand the training horizons of this ability level. *Vocational and Social Rehabilitation of the Feeble-minded* is an incisive, thoughtful analysis of the variables to consider with respect to the retardate, the institution, and the community. *Psychotherapy with the Feeble-minded* reviews theoretical and practical issues and includes a tabled synopsis of reported research results; a sensitive and challenging treatment of the therapeutic effect of diverse institutional procedures is included. In a chapter on speech disorders and therapy, crucial problems are identified with respect to incidence, etiology of, and therapy for various types of disorder. *Longitudinal and Follow-up Studies* covers historical and current efforts to determine the long range success of the various grades of mental defect; a resume of 25 longitudinal studies of individual retardates is provided. *Adoption and Fostering of Children of the Mentally Deficient* presents the many complex factors which must be considered in estimating future development. In all, this volume clearly justifies its title by focusing on the theoretical, empirical, and practical thrusts now being made. Although certain readers will discover familiar material in many of the chapters, the treatment is often fresh, and the broad coverage of research should be informative. In general, issues are dealt with carefully and circumspectly, rather than glibly and impetuously, though lack of space compelled abbreviated treatment in many instances. All chapters are characterized by clarity of presentation, and the book as a whole bears the forthright stamp of scientific precision and rectitude. It is recommended as obligatory reading for persons of any discipline who are required to make decisions regarding the mentally retarded. —J. W. Fleming.

**799. DEKABAN, ANATOLE. *Neurology of Infancy*. Baltimore: Williams & Wilkins, 1959. xiv+388 p. \$12.00.** The pace for the entire book is set by the important first chapter which discusses the developmental anatomy and physiology during the highly significant period from birth to two years of age. The gross anatomical, the histological, and the neurophysiological features are concisely and systematically correlated. A table of norms for head measurements is included. Superb and abundant illustrations document and emphasize the text. The second chapter



outlines the procedures for the assessment of the developmental age and the evaluation of the neurological status. In the subsequent 15 chapters of the book, the neurological disorders of infancy are discussed under standard anatomic and pathophysiologic categories. One of the sections deals with mental deficiency and certain disorders leading to retardation of development. Specifically included in this chapter are mental deficiency, mongolism, familial dysautonomia, and developmental speech disorders. The text has been stripped of all extraneous verbiage. Yet the important points of incidence, symptomatology, course, treatment, and prognosis are well covered. Each chapter is supplemented by a carefully selected and adequate bibliography. While special emphasis has been placed on neurological manifestations during infancy, the scope of the discussions encompasses the subsequent older age groups. This book is highly recommended for all clinicians who treat diseases of children. The book should also be valuable to those who are concerned with the developmental aspects of the growing child. —W. W. Sutow.

**800. ESCALONA, SIBYLLE, & HEIDER, GRACE MOORE. Prediction and Outcome.** New York: Basic Books, 1959. xvi+318 p. \$6.50. (Menninger Clinic Monogr. Series, No. 14) This study was designed to check whether infant data from the original Escalona Infancy Project could be a basis for prediction of later childhood behavior as observed in the Coping Project. The subjects were 31 children seen originally between 4 weeks and 32 weeks and then some 3 to 6 years later. Using rating scales which were then converted into 2 degrees of success of prediction, the authors report confirmation of 66% of Escalona's prediction. After much discussion (7 chapters) of the study and its results, the authors report that "original raters evaluated outcome data with foreknowledge of what had been predicted." An independent judge confirmed the predictions in only 45% of the cases. Since this figure is so perilously close to chance prediction (without considering interdependence of the various items predicted), the authors shift to discussion of unified descriptions of personality in an attempt to evaluate where the predictions failed. Apart from the difficulties in research based on clinical prediction in localizing the specific interactions and weights of variables used by the predictor, the results reported are quite disappointing. If such gifted psychologists as these authors can predict and independently confirm so close to chance, we wonder whether the feeling (which many of us share) that we can predict from infant behavior is illusory. —Z. Luria.

**801. LEDWITH, NETTIE H. Rorschach Responses of Elementary School Children.** Pittsburgh: Univer. Pittsburgh Press, 1959. 185 p. \$4.00. This latest addition to the growing literature on Rorschach responses of young children is a significant contribution, partly because the longitudinal sample ( $N = 138$ ), examined annually for a period of six years, was fairly representative of the general population and partly because of the care with which the results are presented. To test the effect of repeated testing two independent control groups were examined, one at age 7 and the other at age 11. Resulting norms are presented in great detail for 34 factors and determinants and include statistical constants as well as percentages. Popular responses are presented card by card and show that, with age, children's responses progressively approximate adult popular responses. Of considerable interest to clinicians will be the complete protocols for six representative children across the six years of the study. —D. B. Harris.

**802. LOVELL, K. Educational Psychology and Children.** New York: Philosophical Library, 1959. 272 p. \$6.00. This book is designed specifically for the use of students in English University Departments of Education. Until recently these students have largely been using text books written in the 1920's. The present volume attempts to bring up to date and raise the standards of knowledge of educational psychology among English students and educators. The Introduction which sets the pattern for the entire book includes a definition of psychology, a description of the usual divisions of the field, and a discussion of the various methods used. It also includes a description of educational psychology, heredity, and various other related subjects. Most of the 20 chapters are organized along the following lines: (a) a brief

history of the subject, (b) a quick summary of various theories, and (c) application of this material to children—especially in the British educational system. In this fashion the author treats such matters as Motivation, Human Abilities and Their Measurement, Personality and Its Measurement, Observing and Attending, Imagery and Thinking, Learning and Its Ramifications, Educational Assessment and Guidance. The last concerns a special problem in Great Britain where at the age of 11 children are selected by tests for different kinds of secondary education. Very little guidance is provided after this selection has taken place. The author also deals with all the following topics briefly: dullness and backwardness, social behavior, stages of development, delinquency, physiology, and, finally, elementary statistics. Obviously, such wide coverage in 272 pages does not allow for much depth. However, as an elementary survey type text book, this volume manages to cover the field rather efficiently. Considerable emphasis is placed on the differences between American and English educational psychology. The author feels that it is time students in teacher-training institutions in Great Britain quit having to resort to the use of American text books, which do not altogether fill their needs. —E. R. Dubin.

**803. McCORD, WILLIAM, & McCORD, JOAN. *Origins of Crime*. New York: Columbia Univer. Press, 1959. xiv+219 p. \$6.00.** The Cambridge-Somerville youth study was begun in 1935. Its basic hypothesis was that delinquency could be prevented by sustained and friendly relationships with an adult counselor. 650 children were selected from two cities characterized by overly dense population and economic deterioration. The boys were divided into 325 pairs and were matched for physical health, intelligence, emotional adjustment as judged by their teachers, home background, neighborhood, and scores on a delinquency prognosis scale. Half of the "normal" boys and half of the maladjusted boys received counseling; the others did not. The intensity and process of counseling varied. In 1948 it was found, when official police and court records were explored, that 3 years after termination of counseling there were as many treatment as control boys who had difficulty with the law. This book re-examines the now famous Cambridge-Somerville youth study. The authors briefly review the historical antecedents of the original study. They then present the aims and methods of their own study, effects of treatment, origins of crime, family structure and crime, choice of criminal acts, age of criminality, a summary of causes of crime, and implications for the future. The appendices contain the statistical analyses upon which the results are based. The authors reinterpret the original data and present more positive findings. For example, they point out that frequency of treatment is a significant variable: "The child seen by their counselor at least once a week became criminal less often than the child who saw their counselors relatively infrequently." Consideration of intellectual and physical constitution revealed that low intelligence does not necessarily prove conducive to a life of crime. Difficulties at birth were not significantly related to criminal acts at a later time. It has sometimes been said, "the operation was a success, but the patient died." The results of the original study were indeed discouraging and the patient literally died. The operation, however, is being continued by the authors, and they are desperately trying to revive the patient. As one reads their methodology and results, one can almost hear the patient breathe again. This re-examination should be required reading for all those interested in understanding as well as planning research in the multifaceted and complex area of juvenile delinquency. There are a number of meaningful and provocative thoughts which should be of interest to both the clinician and the researcher. —A. M. Kaplan.

**804. OLSON, WILLARD C. *Child Development*. (2nd Ed.) Boston: Heath, 1959. xi+497 p. \$6.25.** This book is a revision of an earlier text which has been widely read and well received. The second edition, like the first, is directed to undergraduate students in education; the book's purpose is to introduce the student to the knowledges and understandings as these have been gathered in child development. The book does this in excellent fashion. Discussions include development of physical, motor, mental, educational, and affective aspects of the child. Special emphasis also

is given to the classroom, curriculum and methods, and the organization and administration of the schools. As intended, it is essentially child development for the teacher. The wealth of data and the many significant generalizations are well presented and illustrated. Such comments could be made, and have been made, regarding the first edition. However, when one raises the question of the unique features and merits of the second edition, one finds that the over-all organization, the chapter headings, and the within-chapter contents are essentially the same. This reviewer's impression is that most of the new material is "added on" rather than integrated into the point of view. An example or two of many that could be cited must suffice. In discussing "The Teacher in Individual and Group Relationships" (Chapter 11), Olson presents an exciting account of language controls of behavior, an account based largely on the provocative work done by his students, and an account substantially the same as described in the earlier edition. The work of Redl and his associates on Influence Techniques is raised in a paragraph (pp. 350-351) but the wealth of ideas and the striking similarities and differences to Olson's original position are not considered. Similarly a chapter on "The Human Relations of the Classroom" exists roughly as it did in the 1949 volume even though social psychological research has appeared at a great rate and extensive theories have been elaborated. Nonetheless, the teacher of educational psychology who comes to his course from orthodox psychology or orthodox education will find, as he did with the first edition, that this is a valuable secondary source of the orthodox child development point of view. —L. M. Smith.

**805. REDL, FRITZ, & WATTENBERG, WILLIAM W. *Mental Hygiene in Teaching.* (2nd Ed.) New York: Harcourt, Brace, 1959. xiv+562 p. \$5.50.** This is the second edition of a book first published in 1951. Readers of the first edition will remember it for such chapters as "Diagnostic Thinking in the Classroom," "The Psychological Roles of Teachers," and "Working with Parents." The present edition is also replete with concrete suggestions for the classroom teacher in fulfilling his role not as a therapist but (1) as one in a position to identify and refer to appropriate specialists children in the early stages of possible emotional disturbances (secondary prevention) and (2) most importantly, as one whose principal function is to provide the daily school environment in which the child can develop his intellectual abilities and his skills and at the same time grow in emotional strength (primary prevention). Three new chapters have been added in the second edition: one on motivational systems underlying behavior, one on unusual learners including both the gifted and the slow learner, and one on helping children develop insight into human behavior. In addition, the second edition provides much more extensive documentation of the major propositions than was true of the earlier edition. In some respects the discussion is dominated by a comprehensive view. In the chapter on "Influences that Shape Lives," consideration is given to both biological and cultural influences. Similarly, not only are the possibilities of mental hygiene practices in the school pointed out in the early chapters but the book closes with a chapter on the "Limitations of Mental Hygiene in Education." An appendix provides numerous sources of additional help and information which contributes further to making this a very useful handbook for teachers. In some other respects the discussions are not comprehensive. The book is principally psychoanalytically oriented, and the effect of this orientation is not discussed with the reader. Other conceptions of the dynamics of behavior are not considered. Also, the analysis of some topics is not as basic as it might be. In the discussion of the permissiveness vs. toughness question, for example, an excellent outline of the historical setting of the problem is given, but the discussion then continues in general terms instead of coming to grips with the basic analysis of the problem. What are the criteria which will help a teacher to decide when to let a child meet a situation in his own way and when to step in and provide more guidance? In the chapter on "Diagnostic Thinking in the Classroom," the place and importance of framing "a hunch" as to probable causes as an early step in the logical approach to classroom behavior is described. Out of what resources does the teacher formulate these hunches? The authors suggest previous experience. But it is not pointed out that

a study of the experimental literature relative to various behavior patterns adds immensely to the teacher's background from which hunches can be built. The analysis of the process of diagnostic thinking in the classroom does not go this far. In spite of these limitations the book is a very useful handbook for classroom teachers for whom it was written. —R. H. Ojemann.

**806. Terman, Lewis M., & Oden, Melita H. *The Gifted Group at Mid-Life*.** Stanford, Calif.: Stanford Univer. Press, 1959. xiii+187 p. \$4.50. This report provides a summary of the main findings of the four previous volumes of this series (*Genetic Studies of Genius*) and brings the Terman Gifted Group to mid-life on the basis of follow-up data completed in 1955. The longitudinal study of gifted children was initiated by Terman in 1921. In 1927-1929 a follow-up study was made and additional subjects were included. Beginning in 1936 and continuing through 1939-1940 information was again collected and a searching examination followed. The third follow-up was made in 1950-1952. In this investigation General Information Blanks were sent to the subjects, also a difficult intelligence (Concept Mastery) test was given, a marital happiness test, a rate of reproduction questionnaire, a childhood and family background questionnaire, and a report on children. The field work included personal interviews, administration of Concept Mastery test and supplementary questionnaires, and testing of offspring with Stanford-Binets. 18% of the subjects did not have personal interviews because of geographical distance from the study. In 1955 a two-page Information Blank was mailed to all subjects, thus completing the data. The original group consisted of 1528 subjects. By 1955 104 had died. In the course of the study 28 subjects have been lost altogether. Of the 1437 living at the time of the field study 95% participated. The mail follow-up of 1955 elicited 93% cooperation. This vast amount of data has been subjected to statistical analysis. In some instances the results are clear-cut and unequivocal; in others considerable interpretation has taken place. The authors feel that the following are the definitive results of the study: The superiority of the group is greatest in intellectual ability, scholastic accomplishment, and vocational achievements. Physically the gifted subjects appear to be above the average as judged by lower mortality and health ratings. The group does not seem to differ from the generality in personal adjustment and emotional stability as judged by mental breakdowns, suicide, and marital failures. On the whole, no negative correlations were found between intelligence and size, strength, physical well-being, or emotional stability. Where correlations occur, they tend to be positive. The gifted maintain their intellectual superiority, the majority ranking close to the 99th percentile of the generality in mental ability. More than 85% went to college and almost 70% graduated. Among the men 86% are in the two highest occupational categories. The general conclusion of the authors is that by and large the gifted subjects have fulfilled the promise indicated by their childhood superiority. —E. R. Dubin.

**807. Vignec, Alfred J. *The Emergency Syndromes in Pediatric Practice*.** New York: Lansberger Medical Books, 1959. 382 p. \$9.00. Practically every disease in children potentially can develop at some phase of its clinical evolution manifestations that either threaten life or require immediate treatment. All acute physiological disturbances caused by any disease call for prompt purposeful therapeutic action. The author has undertaken the difficult task of selecting those conditions which, in his opinion, constitute the more important emergency syndromes that may confront the practicing physician. The title of the book, the author's stated objectives, and the contents, however, do not consistently coincide. Some of the conditions discussed at length, such as acute leukemia, congenital heart disease, rheumatic heart disease, brain tumors, and nephrosis, do not seem basically to be emergency conditions. For quick practical guidance in actual situation, one might question the relative scarcity of diagrams and tabular material and the little consideration given to techniques. For informative discussions of the various entities, the smallness of the book imposes limitations not suffered by readily available larger references. —W. W. Sutow.

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- OBERTEUFFER, DELBERT. **School Health Education.** (3rd Ed.) New York: Harper, 1960. xii+547 p. \$6.00.
- PERRY, NATALIE. **Teaching the Mentally Retarded Child.** New York: Columbia Univer. Press, 1960. xiii+282 p. \$6.00.
- PHILLIPS, E. LAKIN, WIENER, DANIEL N., & HARING, NORRIS G. **Discipline, Achievement, and Mental Health.** New York: Prentice-Hall, 1960. x+198 p. \$3.75.

- READ, MARGARET. **Children of Their Fathers.** New Haven, Conn.: Yale Univer. Press, 1960. 176 p. \$4.75.
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